
Logistics Management Institute

Recruiting the AT&L Workforce Selling the Acquisition Career Field

AQ003T1

September 2003

Janet C. Burchard
Coleen M. Chapman
Philip H. Crowell
Delores A. Street
Amy T. Windisch

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

20031126 036

LMI®

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (MM-YYYY) 09-2003		2. REPORT TYPE Final		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Recruiting the AT&L Workforce Selling the Acquisition Career Field				5a. CONTRACT NUMBER DASW01-00-F-4210	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Burchard, Janet C. Chapman, Coleen M. Crowell, Philip H. Street, Delores A. Windisch, Amy T.				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Logistics Management Institute 2000 Corporate Ridge McLean, VA 22102-7805				8. PERFORMING ORGANIZATION REPORT NUMBER LMI-AQ003T1	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) AET&CD Attn: Steve Tkac 2001 North Beauregard Street, #210 Alexandria, VA 22311				10. SPONSOR/MONITOR'S ACRONYM(S) DUSD (AT&L)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT A Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The Acquisition, Technology and Logistics (AT&L) workforce is facing shortfalls in the personnel needed to accomplish its mission. The workforce is presently organized into 13 career fields and includes approximately 80 job series. These shortfalls will begin occurring within the next 5 years as more and more workers become eligible for retirement. The broad objective of this study was to look at the ways the management of the AT&L workforce was performing its recruiting responsibilities in specific locations identified by the Components and to recommend steps to improve recruiting to meet the future needs of the acquisition community.					
15. SUBJECT TERMS recruiting; Acquisition, Technology & Logistics; acquisition workforce; benefits; nonmonetary incentives					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Unclassified Unlimited	18. NUMBER OF PAGES 76	19a. NAME OF RESPONSIBLE PERSON Nancy E. Handy
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code) 703-917-7249

Recruiting the AT&L Workforce

Selling the Acquisition Career Field

AQ003T1

September 2003

Janet C. Burchard
Coleen M. Chapman
Philip H. Crowell
Delores A. Street
Amy T. Windisch

The views, opinions, and findings contained in this report are those of LMI and should not be construed as an official agency position, policy, or decision, unless so designated by other official documentation.

LOGISTICS MANAGEMENT INSTITUTE
2000 CORPORATE RIDGE
MCLEAN, VIRGINIA 22102-7805

Recruiting the Future AT&L Workforce:
Selling the Acquisition Career Field

AQ003T1/SEPTEMBER 2003

Executive Summary

The Acquisition, Technology, and Logistics (AT&L) workforce is facing shortfalls in the number and types of personnel needed to accomplish its mission. These shortfalls will begin occurring within the next 5 years as more and more workers become eligible for retirement. The fact that many employees are now working past the initial age of retirement eligibility only serves to postpone the inevitable departure of these dedicated public servants.

At the same time, technology and changes in the way products and services are delivered are dictating a change in the skills mix of the workforce. To acquire the human resources needed to meet its out-year requirements, DoD must assess its workforce characteristics and future needs on the basis of missions and strategic plans. This study addresses how to attract the people with those skills and how to bring them into the workforce.

We recommend that DoD take the following actions to improve its recruitment and hiring processes:

- ◆ *Institutionalize strategic planning to minimize future workforce skill gaps.* As the first step in strategic recruiting, an organization should evaluate its long-term mission, determine the capacity and capabilities mix it will need to accomplish that mission in the future, and formulate a plan to acquire or develop employees with the required competencies.
- ◆ *Eliminate deficiencies in current recruiting practices.* AT&L leaders and local managers should assess current recruiting practices and identify areas for improvement. While acquisition organizations are enjoying some success in recruiting, the current sluggish economy may be masking significant deficiencies in local recruiting processes and providing a false sense of security. The recruiting pilot project being sponsored by the Under Secretary of Defense (AT&L) at Edwards Air Force Base is an emerging success story of process improvement. This project has wider application.

Managers need to be more involved in the recruiting process. Acquisition organizations should examine ways to strengthen the communication between their management and the HR office that will accommodate the realities of HR consolidation and downsizing. In addition, acquisition organizations should use new employees who are recent college graduates to help staff job-fair displays and establish employee referral programs.

- ◆ *Streamline the application process to make it more user friendly.* Acquisition organizations should place more emphasis on explaining the hiring process to applicants, while at the same time removing all unnecessary steps, forms, and documentation.
- ◆ *Maximize use of existing incentives and authorities to improve DoD's competitiveness.* AT&L should emphasize the features of its work environment that are superior to those in the private sector. Human Resource (HR) policy offices should publicize the existence of incentives and programs and encourage field offices to use them. Agencies and components should thoroughly analyze recruitment needs and include sufficient funding for recruitment incentives in their budget submissions. Acquisition organizations should increase use of the flexibilities provided by the Student Educational Employment Program and the Federal Career Intern Program.
- ◆ *Develop a branding campaign to foster greater awareness among potential recruits and establish defense acquisition as a career of choice.* Although young people are not generally aware of the nonmilitary employment options in DoD, many have a desire to serve their country. Creating brand awareness is one of the best ways to reach young people in the 18 to 24 age group. In addition, AT&L needs to direct education and awareness efforts to high school and elementary school levels, encouraging students to enter the high-demand computer and engineering fields.

By employing a professional marketing firm to create its brand, DoD would be able to communicate more effectively its name and its recruiting message: serve America, make a difference, take responsibility, manage your own time, and enjoy a challenging, unique, and secure work environment.

- ◆ *Utilize staffing metrics to track recruiting performance.* If top management considers recruiting people with the critical skills that are necessary to an organization's long-term success to be important, then it should have measures in place to monitor recruiting performance.

AT&L needs to start now to take full advantage of the sluggish economy and the companion higher rate of unemployment. Employing the full slate of measures that we propose offers the potential of substantially improving the future acquisition workforce, but taking action on any combination of measures will certainly improve recruiting performance.

Contents

Chapter 1 Introduction	1-1
PURPOSE AND ORGANIZATION	1-1
SCOPE AND METHODOLOGY	1-2
Chapter 2 Research from Managers and HR Staff	2-1
CRITICAL SKILLS IDENTIFIED	2-1
MANAGERS NEED TO ASSUME MORE RESPONSIBILITY FOR RECRUITING	2-2
RECRUITMENT FOLLOWS A LIFE CYCLE	2-4
Strategic Workforce Plans Should Drive Recruiting Efforts	2-4
Identify and Attract Candidates with the Required Skills	2-5
Develop Nontraditional Methods for Attracting New Applicants	2-9
Tracking Responses Is Challenging, But Absolutely Essential	2-9
Take Advantage of All Available Selection Sources	2-11
Do What It Takes to Close the Deal	2-11
Other Recruiting Techniques Can Be Very Effective	2-11
Measuring Performance Is Important	2-12
LOCAL AREA RECRUITMENT ISSUES/WHY IS IT MORE DIFFICULT TO RECRUIT HERE?	2-13
Area Characteristics Challenge Recruiting Efforts	2-13
Lower Pay Results in Lack of Competitiveness	2-14
Defense Downsizing Has Led to a Deterioration of Recruiting Relationships	2-15
Government Hiring Process Delays Job Offers	2-15
PAY AND COMPENSATION	2-15
Pay Does Not Have to Put DoD at a Competitive Disadvantage	2-15
Benefits Make the Department of Defense a Competitive Employer	2-16
Chapter 3 Research from New Employees	3-1
INTERVIEW FINDINGS	3-1
DoD Job Environment Suffers from Misperceptions	3-1
Active Recruiting Excels While Passive Recruiting Struggles	3-2

Benefits Outweigh Salary	3-3
RECOMMENDATIONS	3-3
Assuring Continued Service	3-4
Government Service Is a “Best Kept Secret”	3-5
Chapter 4 Best Practices	4-1
PREPARE A STRATEGIC PLAN TO PROACTIVELY RECRUIT CURRENT AND FUTURE NEEDS	4-1
STREAMLINE THE RECRUITING PROCESS TO MINIMIZE COST	4-2
RECRUIT FROM MULTIPLE SOURCES TO ENSURE A DIVERSE POOL OF CANDIDATES	4-2
CREATIVELY TARGET PASSIVE CANDIDATES TO IDENTIFY THE MOST QUALIFIED	4-3
USE EMPLOYEE REFERRALS TO IDENTIFY POTENTIAL CANDIDATES	4-3
ADVERTISE TO GENERATE APPLICANTS	4-4
STRESS BRAND UNIQUENESS TO SELL DoD AS AN EMPLOYER OF CHOICE	4-5
USE THE INTERNET TO MARKET JOBS AT A LOW COST	4-5
STRATEGICALLY TARGET HARD-TO-FILL POSITIONS	4-6
RECRUIT AT COLLEGES TO HIRE NEW GRADUATES	4-6
EMPLOY STUDENTS TO AUGMENT WORKFORCE AND MARKET DoD	4-7
RECRUIT TO MAINTAIN A DIVERSE WORKFORCE	4-7
MARKET THE COMPANY DURING INTERVIEWS TO INCREASE INTEREST IN JOB OPENINGS	4-8
STREAMLINE INTERVIEWS TO OBTAIN BEST QUALITY HIRE	4-9
TRAIN MANAGERS TO ENSURE EFFECTIVE AND EFFICIENT INTERVIEW TECHNIQUES	4-9
TRACK CONTACTS TO FACILITATE A RESPONSIVE HIRING PROCESS	4-10
MEASURE RECRUITING RESULTS TO IMPROVE EFFORTS	4-10
EMPHASIZE BENEFITS TO INCREASE ACCEPTANCE RATES	4-11
Chapter 5 Conclusions and Recommendations	5-1
INSTITUTIONALIZE STRATEGIC PLANNING TO MINIMIZE FUTURE WORKFORCE SKILL GAPS	5-1
EXAMINE CURRENT RECRUITING PRACTICES TO IDENTIFY AND ELIMINATE DEFICIENCIES	5-1
STREAMLINE THE APPLICATION PROCESS TO MAKE IT MORE USER FRIENDLY	5-4
MAXIMIZE USE OF EXISTING INCENTIVES AND AUTHORITIES TO IMPROVE DoD’S COMPETITIVENESS	5-5

DEVELOP A BRANDING CAMPAIGN TO FOSTER GREATER AWARENESS AMONG POTENTIAL RECRUITS AND ESTABLISH DoD AS AN EMPLOYER OF CHOICE	5-7
UTILIZE STAFFING METRICS TO TRACK RECRUITING PERFORMANCE	5-8
SUMMARY	5-9

Appendix A Interview Guides

Appendix B Salary Comparisons

Chapter 1

Introduction

PURPOSE AND ORGANIZATION

The Acquisition, Technology and Logistics (AT&L) workforce is organized into 13 career fields and includes approximately 80 job series. The broad objective of this study was to look at the ways the management of this workforce was performing its recruiting responsibilities in specific locations identified by the Components and to recommend steps to improve recruiting to meet the future needs of the acquisition community.

The AT&L workforce is facing shortfalls in the personnel needed to accomplish its mission. These shortfalls will begin occurring within the next 5 years as more and more workers become eligible for retirement. The fact that many employees are now working past the initial age of retirement eligibility only serves to postpone the inevitable departure of these dedicated public servants. One way of addressing this impending worker shortage is to begin a comprehensive department-wide campaign to recruit a younger and more technologically savvy workforce. This workforce must have the competencies to acquire the weapons systems to support a transformed military force structure. In response to this situation, the Office of the Deputy Under Secretary of Defense for Acquisition, Technology and Logistics, DUSD(AT&L) asked LMI to do the following:

- ◆ Capture current recruiting processes and metrics at several locations and identify general and specific authorities available to hiring managers and human resource specialists.
- ◆ Assess the factors that make it difficult to attract and hire people with the skills needed by the future acquisition workforce.
- ◆ Conduct additional assessments to understand the extent of the process variances and underlying causes.
- ◆ Review private-sector pay at several locations and compare it with equivalent occupations from DoD's acquisition workforce in the same locations.
- ◆ Recommend improvements to the recruitment processes under the existing authorities that will increase the number of qualified candidates for critical skill positions.

The remainder of this report is organized as follows:

- ◆ Chapter 2 presents the results of our research involving managers and human resource personnel from 16 acquisition-related organizations.
- ◆ Chapter 3 summarizes our findings concerning new employees at those organizations.
- ◆ Chapter 4 examines critical success factors in the private sector and compares them with government practices.
- ◆ Chapter 5 presents our conclusions and recommendations.

The appendixes provide supporting information.

SCOPE AND METHODOLOGY

To begin the study, we used site visits, interviews, focus groups, and questionnaires to examine current recruiting practices for acquisition personnel at several government acquisition organizations. We spoke with managers, human resources (HR) personnel, and new employees at those organizations to determine the extent to which recruiting follows a systematic approach. Concurrently, we reviewed the best recruiting practices in both the private and public sectors.

The purpose of our site visits was to review how recruiting for the acquisition workforce was being performed in highly competitive areas. The intent was to develop a clear understanding of the difficulties encountered by acquisition organizations in recruiting and hiring and to discover programs and tools that are working well.

We visited 16 acquisition organizations.

We interviewed

- ◆ 24 HR staff members,
- ◆ 48 managers, and
- ◆ 45 new employees.

We asked the Services and Defense Contract Management Agency (DCMA) to identify for participation in the study, acquisition organizations that are facing tough challenges in a highly competitive area. Most of the organizations selected are in major metropolitan areas: Boston, San Diego, San Francisco, Los Angeles and Washington, DC. Huntsville, AL is the only location that does not conform to that profile.

We also met with the head of the recruiting division in the Civilian Career Management Directorate at the Air Force Personnel Center (AFPC) at Randolph Air Force Base (AFB), Texas, the manager of the recruiting pilot program sponsored by AT&L at Edwards AFB in California, and the intern program managers for the Navy and DCMA. Table 1-1 shows the location and extent of our interview activities.

Table 1-1. DoD Organizations Visited or Surveyed

Site	HR staff	Managers	New employees
Primary Interview Sites			
Natick Soldier Center, Natick, MA	X	X	X
AMSAM, Redstone Arsenal, Huntsville, AL	X	X	X
Electronics Systems Command, Hanscom AFB, MA	X	X	X
Human Resources Office, Los Angeles AFB, CA	X		
Space and Naval Warfare Systems Command (SPAWAR), San Diego, CA	X		
DCMA, East District HQ, Boston, MA	X		
Contracting Management Office (CMO), Boston, MA		X	X
CMO, Manassas, VA		X	X
DCMA, West District HQ, Los Angeles, CA	X		
CMO, San Diego, CA		X	X
CMO, Santa Ana, CA		X	X
CMO, San Francisco, CA		X	X
Secondary Sources of Information			
AFPC, Randolph AFB, TX		X	
Recruiting Pilot Program Manager, Edwards AFB, CA		X	
Navy Intern Program Manager, Mechanicsburg, PA		X	
Keystone Intern Program Manager, Ft Belvoir, VA		X	

We prepared three separate interview guides to gather information about organizational recruiting procedures, local recruitment environments, and the individual roles of those participating in the interviews. Appendix A contains the interview guides.

The primary difference in the interview guides for the HR staff and managers was that we asked the HR personnel to identify specific metrics they were using to track recruiting and hiring. We grouped the questions into five categories:

◆ Strategic planning and goals

To learn how organizations determine their workforce needs in terms of critical skills and numbers.

- ◆ Use of best recruiting practices

To determine the recruiting culture in the organization by identifying individual recruiting responsibilities and organizational actions related to the recruiting life cycle.¹

- ◆ Local area recruitment issues

To identify local issues that create challenges to recruiting and capture unique recruiting tools or sourcing methods.

- ◆ Total compensation (pay and benefits)

- To determine how well the organization understood and used the various authorities and incentive programs available.
- To understand the extent to which benefits were emphasized to offset salary differentials.

- ◆ Measuring success and recommendations to achieve it

- To learn the metrics being used to measure the effectiveness of recruiting.
- To find out what the managers and HR staff thought needed to be done to improve recruiting locally.

Although new employees were not in a position to provide hard data on the specifics of the study, we included them to add balance and dimension to the information we received from the organizations. Their responses are subjective and highly personal, but they still added a valuable perspective to the challenge DoD faces in restructuring its acquisition workforce. We grouped our questions to the new employees into four categories.

- ◆ General perceptions
- ◆ Personal recruiting experiences
- ◆ Pay and benefits
- ◆ Recommendations.

We concluded that nonattribution was critical in getting candid and honest participation, so we did not identify the source of any comment. We identified organizations that were experiencing some success to help the reader obtain more information.

¹ The recruiting life cycle encompasses identifying skills, attracting candidates, managing responses, selecting, and closing the deal.

Some of our recommendations are local, and others pertain to the component, agency, or department level. The results of this study support some of the Acquisition 2005 Task Force initiatives, as documented in its report to Congress.²

Finally, although this report does not focus on retention, recruiting and retention are two sides of the same coin. Rapidly changing technology helps drive the need for human capital strategic planning. At the same time, today's younger employees view frequent job changes as a way to develop new skills in a competitive labor market.³ An area for future study would be to examine how to integrate evolving critical skill requirements into a strategic plan that accommodates a highly mobile workforce.

² Acquisition 2005 Task Force; *The Acquisition 2005 Task Force Final Report: Shaping the Civilian Acquisition Workforce of the Future*, October 2000, Introduction.

³ National Academy of Public Administration; *A Work Experience Second to None: Impelling the Best to Serve*; September 2001.

Chapter 2

Research from Managers and HR Staff

The information in this chapter is drawn from our interviews with 48 managers and 24 HR staff members in 14 acquisition organizations. The locations selected were identified by the Services and DCMA as areas where competition with the private sector is especially keen.

CRITICAL SKILLS IDENTIFIED

Critical skills are those that the AT&L community has the greatest difficulty in hiring and retaining. The organizations we visited identified engineering (800 series), physical sciences (1300 series), and information technology (2200 series) as critical skills. Engineers and scientists in such fields as food and textile technology, materials sciences, physics, biomechanics, and chemistry are particularly difficult to recruit. Other critical engineering specialties include aerospace, electronics, electrical, and chemical.

DCMA has an extremely difficult task in recruiting engineers because of the nature of its work and lack of incentives. Rather than the leading-edge work that most engineers prefer, DCMA engineers frequently perform administrative tasks such as reviewing engineering change proposals.¹ As a consequence, it is at a competitive disadvantage not only with the private sector, but also with many other government organizations. Moreover, the typical \$5,000 recruiting bonus is often not enough in high-cost areas like Boston or San Diego to attract the number and type of engineers needed.

Other hard-to-fill slots include the following:

- ◆ Financial management/cost analyst (501 series)
- ◆ Equipment specialist (1670 series)
- ◆ Program manager (340 series)
- ◆ Quality assurance (1910 series)
- ◆ Industrial specialist (1150 series)
- ◆ Contracting (1102 series), especially at the journeyman level.

¹ DCMA engineers involved in quality assurance and production are the exceptions because they get hands-on work, which is needed for certification.

The contracting officer series is facing an interesting challenge. These positions do generate interest, but few applicants meet the Defense Acquisition Workforce Improvement Act (DAWIA) requirements. The acquisition regulations that guide defense contracting have become increasingly complex necessitating a more highly educated workforce. The FY01 National Defense Authorization Act (NDAA) established that a bachelor's degree and 24 semester hours in business-related fields of study were mandatory for Level I certification in the contracting (1102 series) career field. However, we were told at more than one location that this requirement has had the effect of limiting many experienced procurement technicians (1106 series) from qualifying for higher-level 1102 positions. Since they cannot be considered for jobs within DoD, they leave for higher paying jobs in the private sector or in non-DoD agencies. In addition, work-life balance issues are preventing many of these employees from taking advantage of the educational opportunities being offered that would make them more competitive for the 1102 positions.

Several organizations also expressed frustration over the impact the DoD Priority Placement Program (PPP) has had on their attempts to develop entry-level employees in several job series. Under PPP rules, organizations are required to fill vacant positions with qualified employees who are facing separation because of downsizing efforts or who qualify under other special placement programs. If such an employee is eligible for the target level of a vacant position, the position cannot be filled at a lower grade. The exception to this practice is when a position is being filled under a comprehensive training plan that provides for noncompetitive promotion eligibility after completion of the training. This is an example of a specific authority that was not well understood and was not used by at least one of the organizations we surveyed.

MANAGERS NEED TO ASSUME MORE RESPONSIBILITY FOR RECRUITING

In our discussions with managers and supervisors, most stated that they have no personal involvement in recruiting. They feel "quite remote from the hiring process." More than 50 percent believe it is not their job to find qualified new employees. The sense among managers is that HR is responsible for the initial recruiting steps of advertising, attracting, and identifying new candidates.

Managers see their role as being limited to processing the paperwork rather than contacting people. Writing position descriptions, performance standards, and requests for personnel action is as close as many managers get to recruiting. After the referral lists have been developed, managers may participate in the interview and selection process. Several managers did express the desire to be more involved, but by not making time available, the system simply does not permit them to participate.

Within DCMA, local recruiting initiatives are very limited because most of the HR functions, including recruiting, are centralized at either the regional headquarters or contracted through Defense Logistics Agency (DLA) in Columbus, OH. However, we were informed of two initiatives designed to provide more local input. The HR office at DCMA East reported that it is working with the Office of Personnel Management (OPM) on a marketing campaign to make jobs more visible, but this effort continues to be a “work in progress.”

In addition, the leadership at the Contracting Management Office (CMO) in San Diego developed tailored inserts for standard brochures about DCMA. These inserts were then distributed to local colleges, professional associations, and equal employment opportunity (EEO) committees for use in recruiting. This effort gave individuals who might be interested in applying for a job a phone number and a name they could contact to get more information about the job and the organization. These type of small steps help to reinsert an element of human contact into a system that has become automated and highly depersonalized.

The Report of the National Commission on the Public Service noted that “Complex and contorted entry procedures stop too many potential applicants in their tracks.”² Managers at Natick, as well as Redstone Arsenal and DCMA San Diego, try to prevent that from happening. They recognize that applying for a government job can be very cumbersome, so they are encouraging people to apply through the centralized system by actually providing job announcements and offering advice on how to navigate through the application process.

The most successful recruiting has occurred when senior management took an active role in recruiting efforts by establishing local relationships with colleges and universities. At Edwards AFB, AT&L is currently operating a pilot program on recruiting where managers are directly involved in planning and carrying out recruiting efforts. This involvement includes establishing and maintaining relationships with local colleges, sponsoring open houses, and suggesting topics for school research papers. At Natick, every manager interviewed has established personal relationships with local and targeted schools. Some local college faculty members currently work at the Natick lab as contractors or as part of the Inter-governmental Personnel Act (IPA) program and recruit students to work on lab projects that qualify for school credit. Senior managers at both locations support these personalized recruiting efforts because they are reaching qualified college graduates.

We found that the recruiting responsibilities of managers were not clearly defined in the organizations we surveyed. In general, managers and local HR offices where HR functions are regionalized, do not take an active role in recruiting; managers in only two of the eight organizations visited were actively involved in recruiting on an ongoing basis. HR offices try to advise managers about scheduled events like job fairs. HR staff and managers also stated that they believe they are

² The National Commission on the Public Service, *Urgent Business for America: Revitalizing the Federal Government for the 21st Century*, January 2003, p. 9.

more effective when they attend those types of events as a team. However, the frequency of attendance at job fairs is inconsistent because recruiting is not considered part of the manager's duties and responsibilities. Therefore, with the exception of the two organizations previously mentioned, participation in recruiting activities occurs only as time permits.

RECRUITMENT FOLLOWS A LIFE CYCLE

The recruitment life cycle refers to a generic set of steps to be followed in a process that extends from identifying workforce needs to gaining acceptance of an offer of employment.

Strategic Workforce Plans Should Drive Recruiting Efforts

Although recruiting requirements are based on strategic planning efforts, few plans identify competencies and skills needed to meet future work requirements. Most of the HR representatives we spoke with stated that their recruiting requirements are based on some level of strategic planning and are usually updated annually. These plans are generally limited to comparing expected turnover with the projected future workload. Very few of the acquisition organizations we surveyed were able to identify any competency gaps that may result when matching the current workforce experience and expertise with future work requirements. Employees in the acquisition workforce of tomorrow will face different challenges than those of today. They will require a different set of skills and competencies to succeed in the changing world of acquisition, with more emphasis on teamwork and business case management.³

Organizations do recognize that a more proactive and in-depth approach to human capital strategic planning is required and most are undertaking some level of workforce planning. For example, nearly all stated they have an annual hiring plan. Locally developed models are frequently used to enable the planning process. Edwards AFB, for example, is using a strategic placement and manpower map (SPAMM), while the HR staff at Redstone Arsenal uses two tools developed by the Department of the Army—WASS (Workforce Analysis Support System) and CIVFORS (Civilian Forecasting System). The latter uses a computer model loaded with 5 years of actual data to predict accession requirements and losses (such as retirements and voluntary losses) for 7 years into the future.

The best example of hands-on involvement by senior leadership and HR is the executive steering group comprising the business area directors and command section established by Natick Soldier System Center (SSC). This group meets regularly to discuss retention and rejuvenation of the workforce. For example, they identify programs or skills with limited potential and use a voluntary separation incentive payment (VSIP) to eliminate positions and shape the workforce so it has the necessary competencies to meet future requirements.

³ Future Acquisition and Technology Workforce, Final Report, April 2000.

The leadership at Natick has recognized the need to continuously maintain long range planning. Hiring needs are forecasted for 5 years on the basis of quarterly team resource planning. This extensive forecasting and succession planning is critical because for many scientific specialist positions the current employees are the only subject matter experts on staff in the organization. This approach enabled Natick to hire an intern 3 years before a projected loss, allowing the individual to gain the necessary skill and experience to operate independently.

While recognizing the importance of linking workforce requirements with a strategic plan, nearly all HR officials and managers emphasize the critical role of fiscal reality. They repeatedly said that the budget drives recruitment actions regardless of the strategic plan. As one manager stated, the strategic plan is "slave to the budgeteers." Hiring freezes, labor-dollar shortages, training program reductions, and unexpected early-outs can make the best-laid plan go awry. This type of fiscal environment makes anticipatory hiring a risky proposition and unfortunately results in a more reactive posture.

In an effort to avoid the chaos that budget perturbations can create, Redstone Arsenal has chosen to outsource much of its work. As a result, its contractor workforce out numbers DoD employees. This approach enables Redstone Arsenal to avoid the personnel shortfalls caused by years of government hiring freezes. In addition, contractors have the flexibility to change the skill sets in their workforce. However, certain functions, such as contracting and program management, are deemed inherently governmental and cannot be contracted out. In these career fields, more than half the organizations in our study reported being chronically understaffed.

Identify and Attract Candidates with the Required Skills

Knowing what skills are needed and allocating a budget are only the first steps. Next, organizations need to identify where they can find the required skills and how to attract the people who possess them.

Organizations use a variety of approaches to target recent college graduates. They include attending job fairs, networking with professional colleagues and alumni, advertising on the Internet, hosting site visits, and promoting efforts that stress diversity in the workforce.

In addition to these types of initiatives, Natick SSC focuses its recruiting efforts on military personnel, particularly uniformed scientists and engineers ending their tours of duty. Natick has also developed close working relationships with the faculty at several local colleges. The curricula at these schools are closely related to the highly specialized work done by scientists and technologists at the center. Finally, Natick has adopted a strategy to attract mid- and senior-level employees by placing paid advertisements in scientific and technical journals and by pursuing contacts through professional affiliations.

Some organizations have found that graduates can be very effective in attracting candidates at their alma maters. Because of their school connection, alumni have a great deal of credibility with students. Many current Redstone Arsenal employees were relocated from St. Louis during a recent organizational realignment. They have found the lifestyle in Huntsville so appealing that a number of them have gone back to schools in the St. Louis area to recruit.

None of the organizations in this study contracts out for professional recruiters or dedicates full-time positions to recruiting. In fact, recruiting is usually an additional duty for current employees. Under the Air Force Career Management Program, functional non-HR employees are assigned full time to the AFPC for recruiting and career management duties. In some instances, organizations are able to provide formal training,⁴ but that is not the rule. The Navy's SPAWAR actually designates certain employees as command recruiters.

In addition to a lack of budget allocated to recruiting efforts, marketing and advertising programs are rare and not coordinated. The reasons include these programs are not a funding priority and most organizations cannot link the dollars spent to a return on investment.

DCMA is one example where money has been allocated to marketing. Managers at the CMO in Santa Ana have developed marketing materials such as cups and pens that feature the organization's website for use when recruiting on campuses. In addition, some organizations have developed and distributed brochures or CD-ROMs to advertise career opportunities in an attempt to create an employer branding campaign. However, many managers discounted the usefulness of these tools because they are not part of an integrated DoD-wide marketing strategy.

While it is not within the scope of this study to evaluate the effectiveness of marketing tools, organizations appear to recognize the challenge they face in communicating to young college graduates the vast opportunities available in the acquisition workforce. The Navy's SPAWAR in San Diego has developed what it calls its New Professionals program. It has created a marketing CD that describes the command, nature of the work, and geographic area—a very appealing presentation. However, part of the introduction is forced to address the general lack of awareness among young people of the opportunities with DoD. Acknowledging that the Navy recruits graduates for its officer and enlisted ranks, the narrator then says, "But what you might not know is that the Navy attracts a large number of civilian scientists and engineers as well." This lack of understanding of DoD as an employer of nonmilitary personnel is a significant barrier to getting young college graduates to listen to the messages that are out there. Even the term "civilian" does not have meaning for many young people today. Informal, word-of-mouth communication remains the predominant form of attracting new candidates.

⁴ DCMA West has an ongoing recruiter training program based in San Antonio, TX.

DoD organizations have enjoyed considerable success in some areas, especially in work/study programs and internships. For example, nearly all organizations hire college students on a temporary basis and a number of work/study programs have been established. Interns constitute a large percentage of new full-time hires for many organizations.⁵ The most well known of these programs include the following:

- ◆ *Summer hires.* These temporary appointments expose young people to the government work experience. However, a summer job is usually only a first step, and no conversion authority is in place for permanent status. Many summer hires are not enrolled in a formal educational program.
- ◆ *Student Educational Employment Program.*⁶ This program provides federal employment opportunities through two components: the Student Temporary Employment Program (STEP)⁷ and the Student Career Experience Program (SCEP).⁸ STEP and SCEP are generically referred to as co-op programs and have met with varying degrees of success. Since 1998, Natick SSC has hired more than 50 students with 95 percent of them selecting a career in government service.⁹
- ◆ *Space scholars program.* The Air Force Research Labs at Hanscom AFB in Massachusetts and Kirtland AFB in New Mexico conduct an 8-week summer space scholars program. The participants are college undergraduates and postgraduates selected on the basis of ongoing work at the labs that complement an applicant's major field of study. These temporary summer hires are brought aboard at the GS-5, 7, and 9 levels. This program is very limited in scope: each year, only three or four space scholars are hired at each location. Thus far, none of these hires has been converted to permanent positions. Nonetheless, it does provide the exposure needed to make more people aware of the job opportunities within the acquisition workforce.

⁵ In addition to offering formal training and accelerated advancement, intern programs utilize a somewhat streamlined hiring process that enables job offers to be tendered more quickly. These quick offers are extremely important to prospective employees, who have bills to pay and cannot afford to wait.

⁶ This program replaced the old Federal Student Employment Program. Students must be enrolled or accepted for enrollment as degree-seeking students taking at least a half-time academic, technical, or vocational course load in an accredited high school, technical, vocational, 2- or 4-year college or university, or graduate or professional school.

⁷ STEP provides maximum flexibility to both students and managers because the nature of the work does not have to be related to the student's academic or career goals.

⁸ SCEP provides work experience directly related to the student's academic program and career goals. Students in SCEP may be noncompetitively converted to term, career, or career-conditional appointments following completion of their academic and work experience requirements.

⁹ One organization we interviewed damaged its credibility with local schools after canceling a co-op program in the middle of the summer because of budget constraints. Students had scheduled classes around work hours and had been depending on the pay they had been offered.

-
- ◆ *Intern programs.* DCMA and the Military Services have centrally managed and, in some cases, centrally funded intern programs. Intern programs typically cover a 3-year period and are characterized by formal training plans, or individual development plans (IDPs), and accelerated promotion opportunities. Because participants receive permanent appointments, these programs are a major source of new employees. Indeed, while these programs are attracting high-quality candidates, they tend to be people beginning a second career rather than new college graduates. At one location, the average age of interns was 52.
 - ◆ *Federal Career Intern Program.* The Federal Career Intern Program (FCIP) is another major vehicle for attracting new candidates because it gives managers extensive flexibility in hiring.¹⁰ Natick SSC reports that it usually hires locally and its time-to-fill is typically within 30 days, much quicker than the usual 45 to 60 days when going through a CPO. In addition, the SSC can often make on-the-spot job offers, pending qualifications and security clearance. Navy SPAWAR reports similar success using FCIP as a source of new employees.
 - ◆ *Redstone Arsenal internships.* Redstone has had great success in recruiting for a variety of intern programs. Under the Para-Trainee Program, organizations may establish an intern program within their own organization. As part of that intern program, they must establish developmental job descriptions for potential to target grade. Job announcements are open to allow maximum time for application, both from inside and outside of government. Most trainees start as GS-1102-5 potential GS-11's.¹¹ Organizations develop IDPs for each trainee. Formal classroom training is coupled with on-the-job training (OJT) to provide the interns with the knowledge, skills, and abilities (KSAs) they will need to perform. Managers use the Internet, professional association websites, and professional journals to advertise opportunities.
 - ◆ *Employee referral program.* The Natick SSC is the only organization we interviewed with an employee referral program. Through this program, an employee receives a bonus if the individual referred is hired and stays 6 months. It works particularly well in attracting prior military and entry-level scientists and engineers from local colleges. Edwards AFB has requested this authority but it has not yet been approved.

¹⁰ The FCIP is designed to help agencies recruit and attract exceptional individuals into a variety of occupations and is intended for positions at grade levels GS-5, 7, and 9. In general, individuals are appointed to a 2-year internship. Upon successful completion of their internships, the interns may be eligible for permanent placement within an agency.

¹¹ Some start at the GS-1102-7 level because of superior academic achievement (grade point average of 3.0) with potential for the GS-1102-11 level.

Develop Nontraditional Methods for Attracting New Applicants

Too many organizations continue to rely on the traditional passive recruiting system. They depend on posted job announcements such as USAJOBS to generate applications. These organizations echoed a similar belief that it is a “structured process with little room for innovation.” They also tended to be the ones expressing the greatest difficulty in attracting and hiring new employees. Nevertheless, nearly all organizations expressed frustration with the government’s antiquated and cumbersome hiring process.

Some organizations have developed ways to minimize the impact of the protracted hiring process. For instance, some people work as contractors at Redstone Arsenal while their DoD job applications are being processed. Natick SSC uses “over hires” to stay ahead of the skills curve. These over hires are individuals hired to fill unauthorized positions, using salary funds that were made available from the elapsed time that exists between positions being vacated and positions being filled. Use of over hires is intended to satisfy short-term, seasonal, or long-term workload that cannot be accomplished within currently allocated manpower authorizations.

Another source of new employees is applicants with prior military experience. For the DCMA East HR staff, the local military transition offices are a great source for quality assurance and production specialists. Navy SPAWAR reports that military retirees are prime candidates for GS-13/14 positions. The post September 11th security environment and the repeal of the dual compensation law have facilitated people moving between the military and civilian components of DoD.

Many organizations actively seek workforce diversity by hiring people with disabilities. DCMA East has established relationships with state and local agencies dealing with disabled people. The Computer Assisted Program (CAP) buys specialized equipment required for the job.

In addition to recruiting for the position, Redstone Arsenal includes the city profile of Huntsville, AL in their job announcements. The Huntsville profile has succeeded in getting people looking for a change of pace to apply for vacant positions.

Tracking Responses Is Challenging, But Absolutely Essential

Response management is simply the ability to keep track of individuals who respond to advertisements, promotional brochures, and job announcements, submit applications and sit for interviews. Only one of the organizations we surveyed uses an automated tracking system to manage responses, and that is the pilot program at Edwards AFB. They use a tool developed by Knowledge Workers to track individual applicants throughout the recruitment process, from initial contact to final hire. The tool also provides resume storage and a search capability, which gives the staffing specialist or manager the ability to call up a particular resume or

selection of resumes that identify a specific skill for which there is a current need. Resumix has a similar tracking capability, but access to it is limited to the regional HR centers.

Although very few organizations actively promote job opportunities to people who have expressed an interest either currently or in the past, Natick SSC and Edwards AFB offer two best practice examples. Natick is one organization whose sales pitch includes site visits to demonstrate the unique character of the work. These visits include a program overview, discussions with managers, and a tour of the lab. Navy SPAWAR also hosts site visits to show the interesting work being performed and the opportunities for achieving a level of responsibility not available in the private sector. The Edwards HR office has a "Meet Edwards" day when engineering students have an opportunity to tour the laboratories, meet with staff members and witness a demonstration of a flight simulator.

Actions that organizations take after a person has applied for a position vary considerably. In some cases, managers are not involved at all. As one manager said, "There is no way for this agency to hold hands with the applicant through the [application] process." They can only direct interested persons to the USAJOBS website. Other offices believe that without personal contact, the application goes into a "black hole." For instance, the leadership team at the San Diego CMO chooses to act as the candidate's "lifeline" throughout the application process, which can usually last from 4 to 6 months. They serve as advocate, pressuring HR when appropriate. This advocacy is needed because the hiring process for DCMA is handled by the Human Resources Operations Center (HROC) in Columbus, OH, and procedurally the San Diego CMO is required to work through the HR liaison office at DCMA West.

HR employees, especially those at regional offices like Columbus, try to keep applicants updated on their status by telephone or e-mail, but it is extremely difficult. The large number of applications that must be processed often overwhelms them. Centralization of HR responsibilities was intended to reduce functional redundancy and save money. However, the lack of personal contact clearly serves to discourage some job applicants. It is an axiom of human nature that people respond when someone shows an interest. On the other end of the spectrum, when there is a local HR office, like at Hanscom AFB, both the HR staff and the functional office try to maintain contact with the applicants.

This situation also highlights an unintended consequence of web-based job applications. Many applicants will submit dozens of resumes in response to job announcements at USAJOBS. Often the applicants' qualifications don't correlate with those required by the job. Nevertheless, these applications must still be processed, which in turn taxes limited staffing resources.

Take Advantage of All Available Selection Sources

A number of programs and authorities are available to help facilitate the selection process. Several organizations reported that using the delegated examining (DE) authority has been successful. This authority allows an organization to establish a local delegated examining unit (DEU) to recruit, rate, rank, and refer applicants instead of paying OPM to do it. As described previously, both Natick SSC and Navy SPAWAR use FCIP to hire new employees more quickly than the traditional system. A few organizations hire employees using the Outstanding Scholar Program and disability appointment authorities.

Do What It Takes to Close the Deal

Recruitment and relocation bonuses aid in closing the deal. Nearly all organizations pay recruitment bonuses, usually \$5,000, for hard-to-fill jobs like scientists and engineers. Relocation bonuses are also used, but generally for journeyman-level candidates instead of entry level. Most of the organizations that do not offer bonuses cited lack of funding as their primary reason. Available money is generally reserved for designated hard-to-fill positions. Navy SPAWAR generally covered first duty station relocation expenses for new hires outside the commuting area, which included about 67 per cent of all FY02 new hires.

Easily the most popular (in terms of expressed interest) and perhaps least utilized authority is the student loan repayment program. Students coming out of college today are frequently burdened with significant debt from educational loans. Employers who choose to offer this benefit report significant success in winning the battle for talent. Employees are eligible for up to \$6,000 per year in student loan repayments. In return, they must agree to a 3-year employment commitment and pay taxes on any money they receive. According to OPM statistics in a recent article in *Government Executive* magazine, DoD made loan repayments to just six people at a cost of \$11,839 in FY02.¹²

Other Recruiting Techniques Can Be Very Effective

Many of the organizations in this study emphasize the training and advancement opportunities available to government employees. This approach differs from the majority of private-sector job offers that often focus only on the initial position and starting salary. Natick SSC ensures that recruits are exposed to the probable career paths and long-term potential offered by government service. While advanced or specialized training programs have proven especially successful in attracting scientists and engineers, these opportunities are available to employees in all career fields of the acquisition workforce. Also, cross training employees in overpopulated career fields for hard-to-fill positions is another use of government

¹² Brian Friel, "Student loan repayment program off to slow start," *GovExec.com Daily Briefing*, June 9, 2003.

training that does not appear to receive enough consideration by organizations with chronic recruiting shortages.

Another technique used with particularly well-qualified candidates for hard-to-fill positions is to hire them at a higher step within the designated grade instead of the first step as is normally the case for new hires. Alternatively, Hanscom AFB took a different approach. It downgraded some positions so that a larger number of technically qualified people would be available to hire. The organization found it was often easier to train a new employee than to find somebody qualified at the higher grade level.

In addition, Navy SPAWAR, through its New Professionals Program, offers new hires two experience tours, each lasting 3 months. These tours give the new hires an opportunity to try out two different jobs involving different work environments and project teams. In this way, they get a better sense of what is available before making a career decision.

Measuring Performance Is Important

Measuring performance is a key part of any program. Without it, an organization may not be able to determine if the program is accomplishing its intended purpose. Recruiting is a process that changes with variables like the economy. What worked last year may not work this year. Measuring elements of the process allows it to be updated or changed to keep it efficient and cost-effective.

Less than a third of the acquisition organizations surveyed were keeping track of some element of performance related to recruiting. Not surprisingly, those organizations were able to speak with greater clarity about what worked as well as problems they were having than the organizations that had no performance measures in place. The following are some of the common metrics organizations were using:

- ◆ Quality and number of applicants. For the Air Force PALACE Acquire intern program, AFPC continuously evaluates the usefulness of various recruiting sources relative to how many applicants are found through them, and the quality of the applicants.
- ◆ Declination rate to job offers. In addition to evaluating the quality and number of applicants from a particular recruiting source, AFPC also monitors the rate of declinations relative to job offers by source of applicants.
- ◆ Retention rate of new employees and interns. Organizations typically use a benchmark like 2 years or 5 years as a way of determining if they are hiring the right people.
- ◆ Time to fill. The time it takes to bring a new employee on board once a vacancy occurs.

LOCAL AREA RECRUITMENT ISSUES/WHY IS IT MORE DIFFICULT TO RECRUIT HERE?

A few of the organizations we visited reported that their recent recruiting efforts have been very successful. *However, while many people are applying for the available jobs, the acquisition organizations we surveyed universally attribute this success to the current sluggish economy.* A “tipping point” effect appears to be in play in which people who have been laid off from the private sector initially continue to look for work there, but, after a point, they begin to see the government as a viable alternative. The sense among these organizations is that once the private sector begins hiring again, many of these job seekers will prefer to return to work in that environment.

Area Characteristics Challenge Recruiting Efforts

This temporary and somewhat localized situation notwithstanding, recruiting continues to be a challenge for the organizations surveyed and the major reasons include the following:

- ◆ *High cost of living.* Boston, Los Angeles, and San Francisco are notoriously expensive areas in which to live. Because the high cost of living is driven by a very competitive local job market, the government is at a competitive disadvantage when it comes to starting salaries. Intern pay at the GS-5/7 entry level is too low to cover the cost of living in these areas. Relocation costs are high, and budget limitations mean that reimbursement is usually not available for interns. Therefore, nearly all interns tend to be from the local area, primarily because they have family or friends who are able to help provide a support structure, since the most significant cost element for most people is housing. The overall effect is to limit the size of the available labor pool, further exacerbating the government’s recruiting dilemma.
- ◆ *Lack of cultural opportunities.* When one organization moved its office to a lower-cost-of-living area, it lost a significant number of experienced employees. It expected that moving to a lower cost area would improve its ability to recruit new, younger employees, but it encountered two unanticipated outcomes. The local area to which the organization relocated did not have a labor pool with the skills capable of meeting its needs. More significantly, when people are accustomed to the choices in restaurants, entertainment, shopping, and especially schools offered in more highly developed areas, they are very reluctant to give them up. Nearly 60 percent chose to resign or take early retirement rather than relocate. To make matters worse, employees who opted to stay were forced to take a reduction in their locality pay.

This situation might have been avoided with better planning. The organization could have surveyed employees to find out whether they were willing to relocate or commute to the new location. Additional research might also have revealed whether the local labor market could support increased demand. In this case, most of the nearby colleges offered degrees in fields that the organization did not need.

Even a perceived lack of cultural opportunities can impact recruiting. According to Redstone Arsenal managers, people from other parts of the country frequently have a negative perception about the Deep South. So in spite of the highly sophisticated work that it performs and the well-developed infrastructure of the community, Redstone Arsenal has difficulty recruiting from states that don't border Alabama.

However, the most extreme example of geographical impact is actually providing a unique recruiting opportunity. The pilot program at Edwards AFB, which is located in the middle of the Mohave Desert, has been using a tactic known as reverse marketing. Many students who attend universities in desert locations such as El Paso, TX and Tucson, AZ have an affinity for that type of environment. Thus for these students, Edwards may represent an attractive option.

Lower Pay Results in Lack of Competitiveness

Many of the organizations surveyed are located in areas where competition abounds for the same types of people. For instance, managers describe Huntsville as a technology magnet, so Redstone Arsenal must compete with private-sector companies as well as other government agencies for engineers. In most cases, the private sector offers higher salaries, and the large contractor workforce offers many job opportunities.

Employees do not always opt for working in the private sector. Sometimes, competition among government agencies creates losses when the grade levels in the local area are out of balance, which is the situation for the DCMA CMO in Manassas, VA. The top contracting officer grade is GS-12, while at other agencies in the Washington metropolitan area contracting officer positions are structured to GS-13 and in at least one agency, GS-14.¹³ Manassas has a one-way revolving door; employees leave the CMO after being promoted to GS-12. As a result, the workload has increased for those who remain, creating a significant backlog of work.

Meanwhile, the HR staff, which is geographically separate from the CMO, does the best it can to address the recruiting and hiring needs, but it simply cannot be as responsive as a dedicated on-site HR resource. Virtually every CMO we visited was using in-house staff to perform some of the HR functions associated with recruiting, hiring, and entry on duty (EOD).

¹³ Engineers are also capped at GS-12, so the same situation exists for that job series.

Pay banding is one solution to the public-private pay disparity. The Civilian Acquisition Workforce Demonstration Project (ACQDEMO) and the DoD Lab Demonstration Project are alternative personnel systems that give managers flexibility to offer salaries that are more competitive. The unintended consequence, however, is that pay banding also gives managers a competitive advantage over other government organizations that do not offer it. For instance, the CMO in San Diego loses employees to the Navy SPAWAR offices because the Navy is able to offer salaries according to pay bands under the SPAWAR Alternative Personnel System.

Defense Downsizing Has Led to a Deterioration of Recruiting Relationships

The acquisition community has experienced a significant reduction in its workforce over the last decade. Many organizations have had very little need to hire; much less actively recruit new employees. As a result, relationships with college placement offices have disappeared and most young people never consider working for the government when they graduate.

Government Hiring Process Delays Job Offers

Many of the HR staff and managers say the hiring process takes too long and applicants will not or cannot afford to wait for the government to make a job offer. A subset of the processing problem is the delay in obtaining a security clearance. These delays, which can be as long as a year, are simply untenable for someone who has bills to pay; they also affect internal moves as well.

PAY AND COMPENSATION

Pay Does Not Have to Put DoD at a Competitive Disadvantage

Starting salaries for government employees are almost always lower than those for private-sector people working in the same career field, regardless of the level at which the employee enters the workforce. (See Appendix B for a comparison of government and private-sector salaries in the cities we visited.) The science and engineering professions are generally better compensated than administrative fields. For instance, the starting salary range for aerospace and electrical engineers in the private sector is about 60 percent higher than the starting salary of a GS-5 step one.¹⁴ On the other hand, the starting salary differential for a government contract administrator is less, although the exact percentage can't be discerned from the data. However, it is not true that the lower salaries prevent the

¹⁴ Based on an average starting pay of \$48,000 for new college graduates (statistics from the National Association of Colleges and Employers, NACE) compared to an average GS-5 pay of \$30,000. The gap drops to 26 percent of the average GS-7, step 1 pay (approx \$38,000).

government from competing for well educated and highly skilled workers. The impact of salary differentials can be lessened in a variety of ways.

CMO San Diego addresses pay disparity by highlighting the uncompensated work hours in the private sector. While private-sector salaries are higher, workdays are traditionally longer as well. When talking with prospective new employees who may be considering a higher offer from the private sector, CMO San Diego helps them to compare hourly rates. By factoring in additional hours and then comparing that rate to the rate earned by a government worker in a standard 40-hour week, they frequently succeed in demonstrating that the government offer is more competitive than it may have first appeared.

Organizations that are successful in recruiting usually take the focus off the initial salary and get prospective employees to consider the long-term potential of government service. Natick SSC is quite effective at getting targeted college students invested in the work of the center early on through research projects. By focusing more on the nature of the work, career advancement opportunities and the responsibilities they will have early in their career, Natick presents a total employment package that is not generally available to scientists and engineers in the private sector.

Looking out 3 to 5 years allows organizations to show a greater degree of comparability among salaries. Step increases and accelerated promotions help close the salary gap with the private sector. The competitiveness of government jobs improves still further when benefits are factored into the total compensation package. However, the salary has to be somewhat comparable before potential new employees will begin to consider benefits.

The most encouraging new authority is pay banding. Pay banding is currently only available to selective organizations through demonstration projects. However, The Defense Transformation for the 21st Century Act recently introduced in Congress proposes a new National Security Personnel System (NSPS). Among other things, NSPS would establish universal pay banding for five career groups. While pay banding would improve DoD's flexibility and competitiveness, it is not a panacea. Even with pay banding and locality pay, salaries may not be enough to compete adequately in some high cost-of-living areas.

The government does offer a large number of benefits to its workers. In addition, a wide variety of hiring incentives are also available to agencies and organizations. These authorities are specifically designed to make working for the government more appealing. Unfortunately, many organizations choose not to take advantage of all the tools that Congress has made available.

Benefits Make the Department of Defense a Competitive Employer

One of the most significant findings of this study is that starting pay differentials do not have to put DoD at a competitive disadvantage when attracting and

recruiting new talent. We have found that organizations with successful recruiting programs understand what's important to their target audience. They improve their competitive position in the marketplace by stressing aspects of the job they know will resonate with the people they are trying to reach. Many government benefits are comparable to those of the private sector, but some are better. The following benefits were most often cited by employees as making the federal government a competitive employer:¹⁵

- ◆ Job security is the biggest draw to government service. New employees, including those previously in the contractor workforce, like the idea of working without worrying about what might happen in the future. The emphasis on minimizing involuntary reductions in force (RIFs) through internal moves and paying displaced government employees at the same level is a great benefit, particularly in the current economic climate.

However, as we learned at Los Angeles AFB, the recent government downsizing has tarnished this perception. The federal government cannot afford to lose its reputation as a source of secure employment for people who do their job well. If that happens, the price to be paid in additional recruiting costs will be high.

- ◆ Equally attractive are the alternative and flexible work schedules available in many organizations. Today's workers value time almost as much as money. Flexible schedules that allow employees to set their own hours within established limits are extremely popular. Telecommuting is another option for federal workers that is encouraged whenever feasible.

This approach provides more choice to employees and allows them to balance work with their leisure and family pursuits. The associated benefit of annual leave is also important, especially since accrued leave balances can be carried along when changing jobs within the government. This characteristic of all government benefits helps to promote professional growth of the workforce.

- ◆ Education and training programs also have strong appeal for potential applicants, especially recent college graduates. Such programs include tuition assistance, student loan repayment, and graduate education programs, as well as the acquisition workforce training offered by the Defense Acquisition University. In addition to education and training, whether the normal on-the-job variety or that available through formal intern programs, is highly valued. We found that among new employees, the government has a very good reputation for providing training and development opportunities for its employees. Many hiring managers do not stress this advantage sufficiently to new candidates.

¹⁵ Other superior benefits include the nature of the work or sense of accomplishment and the federal retirement system.

Chapter 3

Research from New Employees

INTERVIEW FINDINGS

The findings in this section are based on interviews with 45 new employees at 8 different sites. About 25 percent of the interviewees were engineers, and the balance worked in the logistics, contracting, or quality assurance fields. Nearly 40 percent of the employees we interviewed were hired through an intern program. Although we did not ask specific ages, about half were recent college graduates in their early twenties,¹ the remainder were in their thirties and forties. The older new hires were predominately in the contracting and quality assurance areas. Nearly all the new employees were hired from the local area.

DoD Job Environment Suffers from Misperceptions

For nearly all new employees, the current job market is tough, especially for new college graduates with little experience. Technical degrees were in more demand. Some have the perception that a person has to “know somebody” to get hired by the government. That misperception, coupled with the government’s confusing job announcements and complicated application system, keep some potential candidates from applying.

Before coming to work for the government, about 20 percent of the new employees stated they were concerned about becoming part of a large, ineffective bureaucracy. They were also unsure how their degree would be useful in government service. They believed that government workers are not held accountable, hard work is not appropriately compensated, and it is difficult for management to deal with poor performers who do not pull their weight. For those looking to work in the labs, they were afraid it would be a stuffy, formal atmosphere and their colleagues would most likely be “crazy scientists with no life.” Most employees found that their preconceptions were exaggerated.

On the other hand, a significant majority of the new employees had a more positive perception of government service on the basis of personal interaction with current employees. They believed these personal relationships gave them a more accurate understanding of government benefits, job stability, flexible work schedules, travel, and promotion opportunities than their coworkers previously cited. Most of these employees stated that a more fulfilling career—not money—was most important.

¹ About half (12) were engineers, and the other half were contracting.

According to most of the new employees, it took longer for the government to present a job offer than it did for private-sector firms. The average was about 2 months for the government and 1 month for the private sector. The effect of this difference is unclear because the focus groups comprised only people who waited for the offer.

Active Recruiting Excels While Passive Recruiting Struggles

We found that new government employees fell into two categories when it came to the recruiting process:

- ◆ They were identified and recruited by current employees—family members, friends, or professional or academic associates. These individuals provided personal contact throughout the process, including site visits to learn more about the organization’s mission and their work. The visits also gave them the chance to meet other government employees. Many of the new hires were involved in student employment programs before pursuing a full-time government position. This personal approach was most prevalent for scientists and engineers.
- ◆ They applied through the USAJOBS website, which offered very little personal contact until they were hired. This experience was almost universally true for applicants to the intern programs, where most interviews were conducted by telephone. In some cases, interns did not visit their prospective place of employment until their first day of work.² For these applicants, recruiting materials were minimal, usually limited to a brochure about the organization distributed at a job fair. Applicants had to take the initiative to research organization websites and keep in contact with the government HR offices. The majority of the contracting, quality assurance, and logistics specialists were hired from this group.

Regardless of the level of personal contact, applicants cited several reasons for applying and then accepting a government job:

- ◆ They needed employment.
- ◆ They heard positive things about government service (such as job security and training and advancement opportunities).
- ◆ They were interested in the nature of the work they would be doing and the opportunity to apply skills learned in college or previous jobs.
- ◆ They wanted a chance to make a difference.
- ◆ They wanted to work in a particular geographic location.

² In some cases, interns hired through a centrally managed HR office reported to work to find that the local manager did not expect them.

Benefits Outweigh Salary

Because the competitiveness of government salaries is so frequently an issue, we asked the new employees to give us their views on the subject of compensation. Approximately 95 percent of the new employees agreed that starting salaries in the government are lower than those offered in the private sector. The biggest disparity was found among engineers and scientists, but the recruiting bonus and benefits made the offers they received acceptable. Many of the new employees were attracted to the intern programs because of the accelerated promotions, which helped to close the initial pay gap more quickly.

In all cases, benefits were a major consideration in accepting a government position. The most important benefits cited by new employees were

- ◆ job security,
- ◆ alternative or flexible work schedules, and
- ◆ education and training opportunities.

New employees also emphasized the importance of having a life outside of work. They found the 40-hour work week and the generous annual leave provisions that the government offers especially attractive. Natick was the only organization that offered the student loan repayment program. Even though it has not yet been funded, new employees at Natick rated it the second highest-valued benefit. *We found that an unfunded benefit rated so highly with new employees was particularly revealing.*³ Finally, while healthcare is provided by virtually all employers, the ability to carry the government's health insurance into retirement is especially attractive to new employees, along with the new long-term care provisions.

Although not considered as such in the traditional sense, new employees often commented on the nature of the work and job satisfaction as being benefits. Many new employees said that the long-term benefits of government service outweigh the initial, short-term pay gap.

RECOMMENDATIONS

Many of the responses from the new employees echo the recommendations made by the managers and HR staffs:

- ◆ Improve advertising and job descriptions, including those for the intern programs. Make the job announcements understandable to people not already in government service. USAJOBS is currently upgrading its website to give it a more commercial look. According to Claire Gibbons, program

³ Flex time was the most highly valued benefit—the other benefits below loan repayment were signing bonus, accelerated promotions, leave, health insurance, and retirement.

manager of OPM's one-stop recruitment e-government initiative, OPM plans to launch a new, user-friendly version of the site in a few months. She said, "Eventually, the revised version of USAJOBS will allow federal agencies to post job openings in a clear and concise format."

- ◆ Emphasize that pay starts out low compared to the private sector, but begins to catch up quickly.
- ◆ Streamline the cumbersome, online application process. Currently, it intimidates many college students, who see it as a long, arduous process. In fact, the process can be so difficult that private, for-fee agencies exist to help job seekers apply for government jobs.
- ◆ Designate specific points of contact with whom applicants can communicate throughout the process. While it was far more common for an applicant to have no contact with anyone during the application process, on a couple of occasions more than one office contacted an applicant, sometimes with conflicting guidance. In one instance, a local manager was flexible on a new employee's reporting date, but the HR office required the applicant to report to work in 2 weeks. These inconsistencies can be corrected with better communication between HR and local management.
- ◆ Improve the timeliness and accuracy of HR responses to questions. Most of the applicants and new employees have little or no understanding of the government system. Many felt the HR specialists were not able to clearly answer their questions, especially those about benefits.
- ◆ Shorten the time between the interview and the job offer.
- ◆ Improve in-processing and agency orientation programs because employees continue to ask questions even after being hired. At one location, most new employees used the electronic in-processing system, but HR did not always designate the correct forms to be completed, so the employee still had to manually complete forms during the EOD process.

Assuring Continued Service

About 85 percent of the new employees said they were planning to make government service a career.⁴ Some of the actions that are being taken to ensure they continue to make government service a career include the following:

- ◆ Foster mentoring and career management at the local organization. CMO San Diego is establishing "communities of practices," rather than assigning individual mentors because one person, even a senior manager, cannot answer all questions from new employees. This initiative is a *best*

⁴ Two were definitely leaving government service to focus on family, and six others were undecided.

practice: it addresses the tremendous uncertainty that all new employees face when they begin a new job.

- ◆ Continue to provide challenging work that lets them feel like they are making a difference.
- ◆ Continue education and training opportunities, including increased tuition assistance. Employees at one organization said education needed to be valued more so there is incentive to pursue it. Employees at one agency felt Professional Military Education and the Defense Leadership and Management Program (DLAMP) are recognized more than college academic degrees.
- ◆ Expand the organizational grade structure when possible. At one organization, positions in one job series are capped at GS-12, which forces employees to go elsewhere to get promoted.
- ◆ Stress both geographic stability as well as the opportunity to travel and work abroad. Many new employees are not interested in moving from their local area, while others sought government service specifically because there are worldwide opportunities.
- ◆ Recognize and reward outstanding work.

Government Service Is a “Best Kept Secret”

- ◆ Finally, the new employees suggested several points to emphasize when recruiting college students for government service: Stress that money is not everything. Emphasize the nonmonetary benefits that help offset the lower salaries. Time (leave and flexible hours) is very important to today’s young workers. Promote government job security, early responsibilities, and promotion opportunities. Job stability is especially important in today’s economy. Although these nonmonetary benefits are attractive to many prospective employees, starting salaries must still be in the vicinity of other offers
- ◆ Emphasize that it is not just a job. Government service differs greatly from working for a private, for-profit company. It is a chance to make a difference, serve the country, and work around the world in a variety of jobs. Remind them that the U.S. government has more resources to offer greater opportunities than the private sector.
- ◆ Highlight the nature of the work and the “brilliant scientists working with state-of-the-art technology.”

-
- ◆ Do a better job of linking the skills learned in college to the work the government performs. This linkage requires differentiating parts of the government workforce and clarifying nonmilitary opportunities.

We can better communicate this message in several ways:

- ◆ Use young government employees to recruit college students. They are the most credible source to dispel student-held myths of monotonous, redundant work in a mindless government bureaucracy. They can also show the level of responsibility, training, and promotion opportunities with examples from their short careers. AFPC recently put two young interns in a recruiting video and SPAWAR uses young graduates in its New Professionals promotional CD. These efforts constitute another *best practice*.
- ◆ Make it easier to find job openings on the web.
- ◆ Expand summer hire or shorter intern programs so more students are exposed to government service first hand.
- ◆ Schedule additional job fairs at the end of the academic year. Traditionally job fairs occur early in the year, when many students are still undecided about whether to continue their education or start a career. A job fair at that time with less representation from private sector firms might give DoD more visibility.
- ◆ Support the actions of the actions of the DoD Recruiters Working Group, which is striving to raise the public awareness of civilian opportunities across DoD and develop a positive image of DoD as an employer of choice. (Sponsored by the Under Secretary of Defense for Personnel and Readiness and chaired by the Director of the DoD Applicants Assistance Office, this group's purpose is to identify civilian recruiting issues across DoD and make recommendations for their resolution.)

Chapter 4

Best Practices

Companies vary in size, location, and mission, along with their level of competition, success, and financial standing. Nevertheless, whether public or private, every organization is concerned about one resource—people. This chapter examines practices that have contributed to the success or improvement of corporate recruiting and staffing functions. Through personal interviews,¹ literature research, and Internet examination, we compiled information on several critical success factors in recruiting.

If a company's mission involves aggressive growth or simply meeting its recruiting goals, it still needs a well managed, integrated recruiting process. A company can make great headway with innovative practices, such as on-the-spot hiring or new technology, but these practices must be coordinated with other effective recruiting life-cycle practices. Successful recruiting depends on having an effective process, dedicated people, and accurate metrics combined with cost-effective management and budgeting.

PREPARE A STRATEGIC PLAN TO PROACTIVELY RECRUIT CURRENT AND FUTURE NEEDS

The first and most important step in the recruiting life cycle is the planning process. A human capital, strategic, workforce, staffing, or succession plan helps an organization to effectively identify its needs. Planning allows organizations to approach recruiting proactively and minimizes reactive recruiting. Most of the private-sector companies interviewed for this study have a high-level strategic plan, but they are trying to prepare a more detailed workforce plan to limit the reactive recruiting that puts them at a disadvantage in the marketplace.

In August 2001, President Bush made "Strategic Management of Human Capital" one of five goals of *The President's Management Agenda*.² A new concept for federal agencies, the practice of strategic management across the organization is common in the private sector. Strategic management of human capital requires workforce analysis and planning that align with an agency's mission. Although most federal agencies have a long way to go to "get to green" on the human

¹ LMI interviewed six private-sector companies on their critical success factors in recruiting for this study. The interview findings are found throughout this chapter.

² Executive Office of the President, Office of Management and Budget, *The President's Management Agenda, Fiscal Year 2002* [online document], undated [cited July 2003]. Available from <http://www.whitehouse.gov/omb/budget/fy2002/mgmt.pdf>.

capital scorecard, they are conducting workforce analyses and developing workforce plans. Progress for several agencies is at a “green” pace.

STREAMLINE THE RECRUITING PROCESS TO MINIMIZE COST

Attracting and identifying candidates is the most time-consuming and often the most expensive part of the recruiting process. It involves finding ways to cultivate quality candidates to satisfy hiring goals. Some processes, such as college recruiting, require years of building relationships. Others, such as intern programs, require many people to administer and may be managed by separate departments.

The companies we interviewed centrally manage their entire recruiting process from their HR departments. Each has a full-time staff of recruiters who identify candidates and bring them onboard. Functional managers—who support recruiting events and interview and select candidates—assist the recruiters. In some cases when workload surges, companies hire temporary recruiters.

Humana, Inc. reorganized its recruiting infrastructure in order to meet a challenge of hiring 4,200 people each year. It now employs 50 full-time recruiters in different levels:

- ◆ A recruitment coordinator, who supports the recruiters
- ◆ A first-level recruiter, who handles low-level, nonexempt positions
- ◆ A second-level, senior recruiter, who handles higher level positions, including executives and directors
- ◆ A talent resource manager, who supervises the first- and second-level recruiters.

The recruiters are aligned with specific divisions within the company and they work in partnership with the division hiring managers. Before implementing this centralized approach, Humana spent \$23 million to hire 3,100 external candidates. One year after implementation, it spent just \$10 million to fill 5,500 positions.³

RECRUIT FROM MULTIPLE SOURCES TO ENSURE A DIVERSE POOL OF CANDIDATES

Recruiting departments with aggressive hiring goals must use a variety of sources to cultivate as many qualified candidates as possible and ensure a diverse candidate pool. To meet those goals, the organization needs a written strategy that

³ Watson Wyatt Worldwide, *Best Practices in Attraction and Retention* (People Management Resources, A Division of Watson Wyatt & Company, Lake Oswego, OR: 1999), p. 136.

outlines the approach that recruiters should take to cultivate candidates. That strategy should include the sources needed to fill positions as well as when and how often to use them. Continually measuring the productivity of the sources tracks their efficiency, which changes with variables like the economy and technology advances.

CREATIVELY TARGET PASSIVE CANDIDATES TO IDENTIFY THE MOST QUALIFIED

Some sources only target candidates that are actively involved in searching for a new position. Although these sources can be productive, recruiters should also target “passive” candidates.⁴ Targeting passive candidates requires recruiters to take a more creative approach, which also may be more time-consuming. The companies that we interviewed reported that their most productive methods of attracting passive candidates are cold calling, networking, and building relationships, Internet searches, user groups, and attending nontraditional recruiting events (other than job fairs and college days).⁵

Economic drivers such as a tight labor market can force companies to spend more time, effort, and money finding passive candidates. For example, during the technology boom, Cisco Systems had difficulty meeting its recruiting goals. In 2001, it was hiring about 100 employees a month and interviewing 20,000 candidates a year, with an overall goal of hiring the top 10 to 15 percent of people in its industry. To achieve this goal, Cisco began to target passive candidates, starting with focus groups made up of ideal recruitment subjects, such as engineers and marketing professionals employed by competitors. Cisco used these groups to learn how the subjects spent their free time, the websites they visited, and their opinions of job hunting. It then used this information to develop a narrowly focused marketing and networking campaign. Cisco recruiters attended events—including art fairs, microbrewery festivals, and home and garden shows—to work the crowd and speak to prospects informally about their careers.⁶

USE EMPLOYEE REFERRALS TO IDENTIFY POTENTIAL CANDIDATES

Most companies reported that the best source for identifying candidates is their own employees. Every company interviewed has established employee referral programs (ERPs) to motivate employees to refer qualified peers. Well-organized

⁴ Passive candidates are not looking for a job and may be happily employed with a competing company.

⁵ The same companies reported that their most productive methods of recruiting active candidates are online job boards, job fairs (college and professional), media advertisements, employee referrals, online career fairs, and their own websites.

⁶ Patricia Nakache, “Cisco’s Recruiting Edge” [online document], *Fortune*, September 29, 1997 [cited July 2003]. Available from <http://www.trinityventures.com/team/articles/cisco.html>.

and creative ERPs inspire employees to look for qualified talent to refer to their company.

Companies have found that the most successful ERPs are creative, lucrative, and well promoted. They also vary the emphasis of their ERPs depending on economic conditions. For example, during times when the labor market is competitive, companies usually add new monetary incentives and increase the publicity of the program to drive up referrals.

US West Inc., a Denver-based telecommunications company, redesigned its ERP to keep up with an increasing demand for quality candidates in the tight telecommunications labor market. It implemented a web-based employee referral program, Telefriend, which was highly successful because employees could use it easily and they were rewarded generously.

Telefriend allows employees to view all open job requisitions and complete a referral form online. The online referral generates an electronic postcard, which is sent to the referred candidate inquiring about interest in the position. After the candidate has opened the postcard, the system notifies the employee of the status. Employees that refer qualified candidates are rewarded with a T-shirt and their names are entered in a sweepstakes drawing for their choice of a trip or an equivalent cash reward. Employees whose referral results in a successful hire receive a bonus that ranges from \$1,000 to \$3,000.

Initially, Telefriend was promoted through voice mails, e-mails, brochure mailings, and posters. After a few months, monthly reminder postcards were mailed to all employees and details about the program were published in a company newsletter. In its first year, the program generated 9,000 qualified candidates from 11,000 referrals, an 81 percent success rate. The program led to the hiring of 376 new employees, paid \$160,000 in referral bonuses, and awarded sweepstakes drawings to two employees. Employee morale improved because employees felt they were contributing to the future of the business. Most important, the program allowed the company to fill hard-to-fill positions without the expense of search firms.⁷

ADVERTISE TO GENERATE APPLICANTS

Media advertising is another way to generate applicants. The companies we interviewed regularly place recruitment advertisements in local papers, trade journals, on the Internet, and occasionally on radio. Each company also had a branding campaign, which gave it a single identifiable image to candidates. A few of the companies, such as Fannie Mae, had an HR representative within its corporate development and communication department to assist with recruitment marketing. As result, Fannie Mae was able to develop a marketing plan specific to each geographical area in which it wanted to recruit.

⁷ See Note 3, p. 325.

STRESS BRAND UNIQUENESS TO SELL DoD AS AN EMPLOYER OF CHOICE

There is only one DoD. Make it count. An employment marketing and branding campaign should be integrated with the recruiting strategy. The “Army of One” promotion is an example of a successful, integrated marketing and branding campaign. Launched in January 2001, this television and Internet advertising campaign was extremely successful due in part to its integration with other Army marketing and recruiting strategies.

Army recruiters carry laptops with automated recruiting tools that allow them to present, recruit, and complete enlistment paperwork anytime, anywhere. The Army philosophy that everyone plays an important role in recruiting ensured that when the campaign was launched, everyone in the Army family knew about it and could speak to prospective recruits and answer questions. Another source for prospective recruits to get answers to questions is the Army’s recruiting website, <http://www.goarmy.com/>. It has a cyber-recruiting program, where 30 cyber-recruiters work full-time answering questions and managing chat rooms.

Eight months after the campaign was launched, the Army reached its FY01 recruiting goal of 75,800 active duty soldiers. The total number of leads increased by 22 percent from FY00, while visits to www.GoArmy.com increased to an average of 26,000 a day in 2001.

The Army of One campaign succeeded for several reasons. The message resonated with its target audience (17- to 21-year olds), changing their perception of the Army. The Army reached its target audience through advertisements on television and the Internet, mediums frequented by the target age group. The campaign clearly represented the Army’s vision. Most important, it was successfully integrated with existing marketing and recruiting tools and strategies, which allowed the Army to manage the increase of visitors to its website.⁸

USE THE INTERNET TO MARKET JOBS AT A LOW COST

Employment marketing and advertising is competitive and ever-changing. For example, before the Internet, a company merely placed ads in a newspaper to generate applicant flow. Now the most common medium for advertising job openings is the Internet. Every company interviewed markets its open positions on the Internet by way of job boards and its own website. Some use banner ads. The Internet is an evolving source for recruitment marketing. Subscription services are a popular way for companies to stay on the minds of candidates who have expressed interest.

⁸ U.S. Army, Army Public Affairs News Releases, *Army Reaching Recruiting Goals Early*, September 4, 2001, and Army “*Basic Training*” Ads Receive Gold Effie Award, June 26, 2002.

Recently, “push” technology has become an innovative way for companies to market themselves to perspective candidates.⁹ It allows companies to send monthly e-mail newsletters and regular job updates directly to target candidates. Applicants no longer need to continually visit a website because companies now e-mail information and job opportunities directly to them at little cost.

To facilitate this push of information, companies have installed links on their home page that whisk potential candidates off to the job posting section of the site. There, candidates are encouraged to leave e-mail addresses and other relevant information to receive automatic notification as new positions (filtered by interest and expertise) are posted.

More advanced forms of push technology are still developing. One example is a tactic Cisco used to target people from competing companies. Since most prospects visit Cisco’s website from their jobs, the company is able to tell where they work by using technology to read their internet protocol (IP) addresses. If the prospect was logging in from one of the targeted competitors, they were greeted with a screen that said, “Welcome to Cisco. Would you like a job?” If they filled out the subsequent screen, they would be contacted and put in the recruiting pipeline.¹⁰

STRATEGICALLY TARGET HARD-TO-FILL POSITIONS

Even after exploring a variety of sourcing methods, a company can still have unfilled positions in hard-to-fill career fields or geographic areas. In those situations, a recruiting department may choose to implement a tailored recruiting strategy targeting those career fields or geographic areas. These strategies, which usually augment the company’s primary strategic recruiting plan, are customized specifically for certain openings. The strategies may entail additional advertising, focusing networking efforts on a particular career field, or launching a recruiting “blitz” focused on a geographic area.

Although none of the companies that we interviewed reported having implemented large-scale targeted recruiting strategies, most have developed ways of sourcing applicants for hard-to-fill positions. For example, Fannie Mae solicits various bar associations to help fill its attorney requirements.

RECRUIT AT COLLEGES TO HIRE NEW GRADUATES

Companies that hire new graduates should include college recruiting in their strategic hiring plans, cultivating strong relationships with schools that meet their requirements. In considering colleges, companies should examine the diversity of

⁹ Push technology is the prearranged updating of selected information on a computer user’s desktop interface through periodic transmission over the web.

¹⁰ See Note 6.

the student body, performance of past hires, cost-per-hire rates, acceptance ratios, and curriculums that complement company needs.

The companies we interviewed all had well-established college recruiting programs. The number and type of schools they had relationships with varied depending upon the need for new graduates. For example, Hallmark wants to recruit 50 to 75 students each year for its headquarters and has a program targeted at fostering strong relationships with 25 to 30 schools that meet its requirements. Hallmark invites representatives from these schools to visit the company, giving them an opportunity to gain insight on Hallmark and its operations and get a better idea of the kind of students that Hallmark recruits. Hallmark also sits on a number of corporate boards that advise colleges about recruiting. In addition, Hallmark is a fellowship sponsor to the Consortium for Graduate Study in Management. This organization provides fellowships and guidance to talented minorities as they pursue high-quality graduate management education.¹¹

With a few exceptions, most of these sourcing methods focus on attracting “cold” candidates or candidates that have no prior experience with the prospective company. However, candidates that already have had experience working with the company—ex-employees, contract employees, customers, and students from co-ops and intern programs—are an invaluable source of potential employees. These candidates may already have the skills and experience necessary for the job; they may also have developed a high level of interest or loyalty to the company as a result of their prior experience.

EMPLOY STUDENTS TO AUGMENT WORKFORCE AND MARKET DOD

Many companies use co-ops, summer hires, internship programs, and college work-study programs to augment their workforce and meet their employment needs. These programs are valuable sources for cultivating quality candidates for future hiring because they help students obtain important business experience. If a business connects with students while they are still in school, the business becomes influential in shaping the students’ curriculum and future career goals. Companies like Fannie Mae use a variety of intern programs to benefit different groups of students. It offers corporate, citywide, academic, and shadow internship programs. More than 125 interns have participated in the programs since 1998, with 20 becoming full-time employees.

RECRUIT TO MAINTAIN A DIVERSE WORKFORCE

Diversity recruiting programs are another important source of quality applicants. Hallmark, recognizing the importance of hiring a diverse mix of college talent and seasoned professionals, has developed a recruiting strategy to meet its aggressive

¹¹ See Note 3, p. 127.

diversity hiring goals. It actively solicits qualified female and minority candidates by scheduling recruiting events and participating in minority career fairs. It attends minority conventions, such as the National Black MBA Conference and the National Society of Hispanic MBA Conference, and advertises in minority publications, such as *Black Enterprise*, *The Black Collegian*, *Hispanic Magazine*, and *Winds of Change*.¹²

MARKET THE COMPANY DURING INTERVIEWS TO INCREASE INTEREST IN JOB OPENINGS

Finding and identifying candidates is half the process of attracting good candidates. Capturing their attention is equally important. Companies must have an interesting story and tell it in an appealing way. Most companies surveyed had a standard presentation they give to candidates during an interview or networking event. Some made the presentation verbally, others used PowerPoint, while still others used audiovisual media. The presentations usually highlighted the company's unique features, such as interesting work, a stable work environment, or exceptional benefits.

A number of companies not limited by security clearances offer site visits to interviewing parties and demonstrations of their work. Others presented work demonstrations at conferences, trade shows, and job fairs.

Like many companies, Humana considers its recruiting efforts similar to a marketing function. The recruiters are actually selling the company as a product to candidates and persuading them to continue their careers with them. Humana compensates its recruiters like marketing associates—they have a base salary and receive monetary awards for meeting hiring goals.¹³

Ideally, a company has more of its workforce involved in the recruiting and marketing efforts than just the recruiting staff. Cisco has found an innovative way to involve its employees in recruiting. With information collected from focus groups, Cisco learned how happily employed people could be enticed to interview for a job. The company launched an innovative “friends” program to help prospects make a contact or a “pal” at Cisco who could speak informally with them about what the work is like. Cisco offered its employees a generous referral fee and a lottery ticket for a free trip for each prospect or pal they hired. The employees were matched with prospects that had similar backgrounds and asked to regularly contact them. The program was advertised in local movie theaters and resulted in 100 to 150 requests per week from prospects that wanted to be contacted by a pal. One-third of Cisco's new hires resulted from this program.¹⁴

¹² See Note 3, p. 127.

¹³ See Note 3, p. 135.

¹⁴ See Note 6.

STREAMLINE INTERVIEWS TO OBTAIN BEST QUALITY HIRE

As noted earlier, all the companies interviewed had full-time recruiters to facilitate the recruiting process and technical managers to assist with interviewing. Although their processes varied, each company strived for a streamlined, detailed interview cycle with a quick turnaround.

Apple computer designed its interview process to compete in the very competitive personal computer market. Its goal was to decide whether a candidate would succeed in a position by focusing on experiences and responsibilities, and less on subjective measures. The actual interview process had six stages:

1. Pre-interview team meetings in which the manager and the direct reports develop "probe assignments." Those assignments consisted of questions in topic areas related to a position's core competencies. The manager then used these questions during a phone screen with the candidate. Candidates who passed the phone screen moved to the second stage.
2. Interviews with several panels comprising hiring managers, HR personnel, and engineers. The engineers were chosen based on the amount of time and interaction they will have with the candidate, if hired.
3. A feedback session from the first set of interviews, resulting in the selection of one candidate to continue in the process.
4. A full-interview team, including representatives from related functional areas. Sixty percent of the candidates who are interviewed by one of these teams receive a job offer.
5. A feedback session, in which all involved parties share their opinions and form a decision on whether to extend an offer.
6. The offer.

Apple chose this process instead of a more streamlined process involving fewer parties because it believed investing more time up front resulted in a better quality hire. HR was able to justify this approach through productivity gains and fewer employee relations' problems.¹⁵

TRAIN MANAGERS TO ENSURE EFFECTIVE AND EFFICIENT INTERVIEW TECHNIQUES

Like Apple, many companies use a combination of HR and functional managers to conduct interviews. The HR and functional areas need to work closely together

¹⁵ See Note 3, p. 45.

to ensure this approach succeeds: attending meetings, gathering feedback, and benchmarking one another. The functional managers must be well trained in interviewing skills. Most companies provide their managers with recruiting and interviewing skills training. Others, such as 3DO and Sears, have published guidance material for managers to reference on their intranet locations and in CD format.

When the job market is competitive, the interview process must be completed in a reasonable timeframe. If too much time lapses between the resume submittal, the interview, and an offer, the likelihood that the candidate will accept an offer from another company increases.

TRACK CONTACTS TO FACILITATE A RESPONSIVE HIRING PROCESS

All companies interviewed had an automated candidate-tracking tool and a resume database that allowed for resume storage, search capabilities, and job requisition storage. These types of information systems are necessary to handle the candidate flow in an active recruiting office. The systems help facilitate the hiring process for recruiters and keep applicants better informed of current job openings. In many cases, they help hiring managers share candidates instead of restricting them to jobs for which they applied originally. These systems, however, are not designed to totally automate the staffing process or eliminate the human factor in decision-making.

To help streamline an intensely paper-driven recruiting process, AT&T Wireless Services implemented a few technology-driven tools. Restrac, a resume-tracking program, allowed recruiters to store and track resumes and to quickly search for candidates. Recruiters can also build and access job requisitions and produce reports. AT&T implemented a new webpage dedicated to its career opportunities. The website displays all of the company's job openings and allows internal and external candidates to choose from a set of search categories to obtain a list of jobs by region, location, or function. Information on job listings is automatically updated nightly using data from Restrac. The website allows applicants to submit their resumes online. Finally, AT&T has a call-in service that allows applicants to identify job categories of interest and receive job requisitions and applications via fax.¹⁶

MEASURE RECRUITING RESULTS TO IMPROVE EFFORTS

To gauge how well they meet their recruiting goals, companies must measure their progress. Although not every company we interviewed regularly measured and analyzed its recruiting processes, all recognized the need to do so to identify effective practices and continuously improve their recruiting efforts. Because the

¹⁶ See Note 3, p. 63.

recruiting process changes with variables like the economy, updating or changing a specific process keeps it efficient and cost-effective. Some of the statistics worth tracking include the number of hires, hires per recruiter, cost per hire, cycle time, turnover and retention rates, internal customer satisfaction, number of applicants by source, and offer-to-accept ratios.

Keane Inc., a Boston-based IT consulting firm, believes it is critical to publish recruiting metrics and compare them to budgets and forecasts. As part of a reengineering effort in its HR and recruiting functions, Keane chose to measure cost per hire, cycle time, and number of hires per branch and recruiter. Before launching the reengineering effort, Keane did not share this information. Since making information about number of hires a matter of public record, recruiter performance has increased.¹⁷

EMPHASIZE BENEFITS TO INCREASE ACCEPTANCE RATES

Although a well integrated and managed recruiting process engenders success, acceptance of a job offer often comes down to the competitiveness of the starting salary. Unless the company has successfully sold candidates on its nonmonetary advantages, it is likely to lose them to more competitive offers.

Some government organizations, like the Environmental Protection Agency, use many quality-of-life incentives to help it compete with other companies.¹⁸ Those incentives include alternative or flex work schedules, part-time employment and job sharing, telecommuting, child and elder care services, on-site child development centers, on-site health and fitness centers, leave bank or transfer programs, career assessment counseling, employee counseling, and assistance programs. In addition, HR departments must work with the compensation department to ensure offers of employment are as competitive as possible.

Another organization, the Naval Weapons Center (NWC), began a joint personnel demonstration project with the Naval Ocean Systems Center. One of the project's goals was to become more competitive in recruiting professionals in critical occupations, including junior scientists and engineers, by offering higher starting salaries. Before the demonstration, inflexibility in setting pay was causing NWC problems in recruiting high-quality recent graduates. In FY79, NWC filled only 35 of 85 new openings in science and engineering. The average grade point average (GPA) of these new employees was 2.7 out of 4.0. By offering higher starting salaries through the demonstration project, NWC was able to meet its annual hiring requirements of 125 to 175 scientists and engineers, with average

¹⁷ See Note 3, p. 145.

¹⁸ The Performance Institute, *Strategic Recruitment for Government: Ten Innovative Practices for Designing, Implementing, and Measuring Recruitment Initiatives in Government*, February 2003, p. 30.

GPA's increasing to 3.3 out of 4.0. The Navy Civilian Personnel Management Demonstration Project was made permanent through legislation in 1994.¹⁹

Some companies with less competitive monetary offers will add recruitment or relocation bonuses on top of their salary offers. In addition, several government agencies use pay banding to ensure that salaries are competitive with the private sector. The National Imagery and Mapping Agency (NIMA) uses pay banding in its acquisition workforce intern program. The entry-level pay for interns, Band 2, is comparable to that of a GS-8/9/10, or \$35,850. If an intern has a graduate degree or other experience, the salary can start at up to \$40,000. Interns can earn as much as \$60,000 in Band 2. NIMA interns receive pay adjustments at 9 months and then again 12 months later. Upon successful completion of the internship program and conversion to permanent employment, interns are promoted to Band 3, with a starting salary of \$47,910, equivalent to GS-11/12. Although the internship program is 3 years, NIMA anticipates that 60 to 70 percent of its intern program graduates will remain employed at NIMA for 5 to 7 years. NIMA attributes part of the high rate of retention to its pay banding system.²⁰

¹⁹ Human Resources Department, Naval Air Warfare Center, Weapons Division, *General Information and Reference Sources for Employees: Navy Civilian Personnel Management Demonstration Project* [online document], April 1996 [cited July 2003]. Available from <http://www.nawcwpns.navy.mil/~hrd/demohand.pdf>.

²⁰ Telephone interview with NIMA internship representative, April 24, 2003.

Chapter 5

Conclusions and Recommendations

This chapter presents our conclusions on AT&L's workforce recruitment and hiring practices and our recommendations for improvement. The conclusions are derived from our observations at several DoD acquisition organizations and from industry best practices.

INSTITUTIONALIZE STRATEGIC PLANNING TO MINIMIZE FUTURE WORKFORCE SKILL GAPS

Conclusion

Acquisition organizations that have aggressively developed and executed strategic workforce plans have generally had the greatest success in recruiting new talent.

Recommendation

As the first step in improving its recruiting practices, an organization should evaluate its long-term mission, determine the capacity and capabilities mix it will need to accomplish that mission in the future, and formulate a plan to acquire or develop employees with those skills and competencies.

The President's Management Agenda states: "In most agencies, human [capital] planning is weak. Workforce deficiencies will be exacerbated by the upcoming retirement wave of the baby-boom generation. Approximately 71 percent of the government's current permanent employees will be eligible for either regular or early retirement by 2010."¹ Even if the expected retirement rate of 40 percent is high, a substantial number of experienced employees will depart in the next 10 years.

EXAMINE CURRENT RECRUITING PRACTICES TO IDENTIFY AND ELIMINATE DEFICIENCIES

Conclusion

The weak economy may be masking recruiting process deficiencies.

¹ See Note 2, Chapter 4.

Recommendation

AT&L leaders and local managers should conduct a strategic and tactical assessment of current recruiting practices and identify areas for improvement, while at the same time they should devise plans to take advantage of the large number of highly qualified workers and graduates that are presently looking for challenging and productive employment opportunities.

Most of the organizations we surveyed for this study rely on passive techniques such as the USAJOBS website as their primary means of recruitment. While they are enjoying some success in recruiting, the current sluggish economy may be masking significant deficiencies in local recruiting processes and providing a false sense of security. The managers we interviewed were universal in their assessment that the economy was indeed the predominant reason for their current recruiting success. Once the economy turns around, the current supply of talented unemployed workers will begin to disappear. In fact, Federal Reserve Chairman Alan Greenspan, in recent testimony before the House Financial Services Committee, stated "We believe we are at a turning point. Our best judgment is that things will be improving."² Indeed, with many economists and industry analysts forecasting an improvement in the economy by the end of the year, DoD may have a limited window of opportunity to address any shortcomings in its recruiting strategies. An improved economy will likely have two outcomes:

1. Businesses will begin hiring, thus drawing down the pool of potential applicants currently looking for work.
2. The value of retirement accounts of retirement-eligible federal employees that was lost over the past 2½ years will be restored. This restored value will probably trigger the exodus of thousands of workers who have had to put their retirement plans on hold.

Conclusion

Organizations that made recruiting a part of their culture, supported by manager and employee involvement, have had the most success in attracting and hiring high-quality candidates.

Recommendations

Managers at the organizational level need to be more involved in the recruiting process.

While some organizations use managers on occasional recruiting trips, they need to require their managers to always be in a recruiting mode. Organizations with no

² Patrice Hill, "'Turning point' forecast for economy," *The Washington Times*, July 16, 2003. Available from <http://www.washtimes.com/business/20030715-094947-7041r.htm>.

full-time recruiters should be especially aggressive. Managers can foster relationships with colleges and universities, including mentoring of students, participating in career days, and hosting field trips. They can also use memberships in professional associations and other groups to make prospective employees aware of career opportunities in their organizations.

Use new employees who are recent college graduates to help staff job-fair displays.

Employees who are also recent graduates have a lot of credibility with college seniors targeted for recruitment. The new employees we interviewed stated they would be inclined to stop and talk with a younger person manning a recruiting display. Moreover, if the organization is interested in attracting women and minorities, then they also need to be part of the recruiting team.

Establish an employee referral program.

Employee referral programs are an effective, efficient way to generate new prospects. Most new employees are motivated and in many cases encouraged to apply because of personal relationships with current employees.

Most employees are proud of the organization for which they work. They want to see it succeed. This pride and desire for success motivates employees to encourage others in their circle to apply. Furthermore, they tend to know the jobs available and whether someone they know is nominally qualified. Organizations need to tap into this resource by encouraging their employees through internal communication means, such as e-mail and bulletin board announcements.

Rewarding employees who encourage a successful applicant to apply can enhance this process. The rewards can be monetary or nonmonetary. Monetary rewards do not have to be large to have the desired effect. Fifty dollars or a gift certificate to a restaurant can be effective; recognizing the employee's contribution is key. For that reason, even a certificate of appreciation can be productive.

Conclusion

Poor communication between HR staffs and line managers can adversely affect the recruiting and hiring process.

Recommendation

Acquisition organizations should examine ways to strengthen the communication between their management and the HR office that will accommodate the realities of HR consolidation and downsizing.

With centralization of HR functions becoming more of a reality every day, managers need to learn to work more closely with classifiers to ensure that the

vacancy announcement properly describes the job responsibilities. The importance of this action is illustrated by an actual situation. A position required a person with an engineering background to manage other engineers rather than engage in practical, hands-on engineering. The result was an employee with unmet expectations. At a minimum, a poorly written job announcement can result in a significant waste of time and effort by all concerned.

Another example of poor communication involved a failure to get manager input on the rating criteria. If the rating criteria used to determine the applicants referred to the manager does not match the KSAs, the result may be a referral list made up of candidates who are not qualified.

STREAMLINE THE APPLICATION PROCESS TO MAKE IT MORE USER FRIENDLY

Conclusion

The federal job application process is confusing and intimidates prospective employees.

Recommendation

Acquisition organizations should strive to do a better job of explaining the process to applicants and remove unnecessary steps, forms, and documentation.

The federal hiring process has long been cumbersome and in need of reform. A recent report from the General Accounting Office stated, "There is widespread recognition that the current federal hiring process all too often does not meet the needs of agencies in achieving their missions, managers in filling positions with the right talent and applicants for a timely, efficient, transparent, and merit-based process."² While organizations can do little to change the existing application process, they may be contacted by individuals trying to navigate the system. These contacts represent opportunities to assist potential new employees who may be having trouble filing applications.

DoD recently established the Defense Application Assistance Office (DAAO) to help individuals seeking government positions. The DAAO will provide a conduit between job applicants and DoD recruiters using web technology, e-mail, and live interaction with DAAO staff advisors. The staff will help complete required documentation and forms and advise on responding to vacancy announcements. DAAO will also facilitate a department-wide recruitment outreach program.

² General Accounting Office, *Human Capital: Opportunities to Improve Executive Agencies' Hiring Processes*, GAO-03-450 [online document], May 2003 [cited July 2003]. Available from <http://www.gao.gov/highlights/d03450high.pdf>.

MAXIMIZE USE OF EXISTING INCENTIVES AND AUTHORITIES TO IMPROVE DoD'S COMPETITIVENESS

Conclusion

By emphasizing nonmonetary incentives, AT&L may be able to overcome the attraction of higher salaries offered by the private sector.

Recommendation

AT&L should develop a value proposition that stresses all the benefits available to a government employee

The government cannot generally compete with the private sector in starting salaries, but salaries are not the sole motivating factor when people decide whether to accept a job offer. While salary is still the single biggest factor, many of the new employees we interviewed listed several other considerations. Time is becoming increasingly important to today's workers, so leave programs, flexible work schedules, and 40-hour work weeks were cited most frequently as positive attributes of government service.

Among the engineers with whom we spoke, many were seeking an opportunity to work with cutting-edge technologies and people who are renowned in their field of expertise. In addition, the level of responsibility that new employees enjoy is not matched in the private sector.

Finally, altruism is still an important factor among people of all ages, especially recent college graduates. In several of our interviews, we heard that people chose to work for DoD because they wanted "to serve their country" or they wanted "an opportunity to make a difference."

These factors are powerful motivators that can offset initial salary disparities, but before DoD can take advantage of them, it must be ready to answer the question: "How will I be better off if I come to work for AT&L?"

Conclusion

By making greater use of existing hiring flexibilities (e.g., monetary incentives, student and career intern programs), acquisition organizations have the potential to increase the attractiveness of a career in the defense acquisition workforce.

Recommendations

Department and agency headquarters HR policy offices should publicize the existence of their hiring programs and encourage field offices to use them.

All HR offices should be familiar with the options outlined in OPM's "Human Resources Flexibilities and Authorities in the Federal Government."³ This document covers a wide range of hiring incentives and alternative staffing options that give agencies great flexibility in recruiting. Examples include internships, recruitment bonuses, student loan repayments, and student employment programs. Organizations that use these flexibilities are more successful in attracting high-quality applicants.

In addition, OPM has recently issued new rules that effectively eliminate the "Rule of 3" and extra points for veterans when agencies choose to rate applicants in categories rather than numerically. The new rules also provide for expanded direct-hire authorities, but require that agencies submit extensive documentation, including strategic plans, workforce analysis, labor market data, and employment trends to obtain approval. The success of this new authority is currently unclear.

Agencies and components should thoroughly analyze their recruitment needs and include sufficient funding for hiring incentives in their budget submissions.

Since starting salaries for new employees are lower than those available in the private sector, AT&L, the Services, and the Defense Agencies need to budget funds to pay for existing monetary incentives such as payment of recruiting bonuses, relocation bonuses, first duty travel, college loans, and referral incentives. Most of these are not widely used because of their cost and the fear of appearing to show favoritism to some employees. However, not having the necessary skills to perform the mission can be very costly to an organization. The private sector regularly uses these types of incentives when recruiting for critical positions, so if they want to be competitive, the Services and Defense Agencies must be prepared to match them.

People also like to feel valued and wanted. The incentives available to government organizations are a relatively inexpensive way to demonstrate how much they value an individual.

Acquisition organizations should increase use of the flexibilities provided by the Student Educational Employment Program⁴ and the FCIP.⁵

Neither of these programs requires the kind of public notice required for traditional hiring, and those hired under SCEP can be converted to career appointments without further competition after graduation. They are also a good way to show the advantages of government employment and to build relationships with the colleges and universities participating in the program.

³ Office of Personnel Management, *Human Resources Flexibilities and Authorities in the Federal Government* [online document], October 2001 [cited July 2003]. Available from <http://www.opm.gov/DEMOS/flex/main2.htm>.

⁴ See Note 6, Chapter 2

⁵ See Note 10, Chapter 2

FCIP also has several advantages:

- ◆ Public notice is not required.
- ◆ Initial appointments can be made at any grade level for which the agency has a formal training program in place, but the program is designed for an initial appointment at the GS-5, 7, or 9 level.
- ◆ Appointments can be made anytime during the year.
- ◆ There is no limitation on promotion potential.

DEVELOP A BRANDING CAMPAIGN TO FOSTER GREATER AWARENESS AMONG POTENTIAL RECRUITS AND ESTABLISH DoD AS AN EMPLOYER OF CHOICE

Conclusion

AT&L does not appear to be doing an effective job of creating brand awareness among the people it would most like to recruit.

Recommendation

To address the needs of the acquisition workforce, AT&L should develop a marketing and branding campaign to foster greater awareness among potential recruits and establish acquisition as a desirable career choice.

The uniformed Services all have trained recruiting forces and they budget millions of dollars to recruit the people they need to accomplish their mission. Likewise, the private sector spends, on average, almost \$7,000 per new hire.⁶ The relatively passive approach that has characterized DoD's civilian recruiting strategy in the past will not work. For the acquisition community to be competitive, now and in the future, there needs to be a marketing and branding campaign that is integrated with a central AT&L recruiting strategy.

College students are not generally aware of the nonmilitary employment options in defense acquisition. Because they associate DoD with the armed forces, even the term "civilian" has no meaning to them in the context of DoD. Although not everyone is prepared to make the unique sacrifice military service entails, the new employees we surveyed expressed a strong desire to serve their country. They also shared that most of their friends had similar feelings of wanting to contribute and make a difference.

⁶ The Society for Human Resource Management (SHRM) reported the average CpH for exempt employees across all company sizes was \$6,943; 2002 SHRM/EMA Cost per Hire Survey, p. 17.

The possibility that a national constituency exists for government service bodes well for the department. One of the best ways to reach young people in the 18–24 age group is through brand awareness. By employing a professional marketing firm to create its brand, AT&L can sensitize young people to the name and any associated message. It can then begin to sell the advantages of working for DoD: the same ones regularly appear in surveys—serving America, making a difference, challenging and unique work environments, early responsibility, job security, and managing your own time.

AT&L also needs to direct recruitment and awareness efforts to high schools and elementary schools to encourage students to enter the challenging, high-demand computer and engineering fields. One positive first step is the website sponsored and funded by the Director of Defense Research and Engineering. This website (Edugate: <http://web.lmi.org/edugate/default.htm>) provides information about nearly 150 science, mathematics, and engineering educational programs sponsored in whole or in part by DoD.⁷

UTILIZE STAFFING METRICS TO TRACK RECRUITING PERFORMANCE

Conclusion

Organizations that measure recruiting performance have more information available with which to evaluate their program.

Recommendation

Acquisition organizations should develop and use measures of recruiting performance that will enable them to continually assess how their program is performing.

If top management considers recruiting new employees with the necessary skills important to an organization's long-term success, then they also need performance measures in place to tell if they are making progress and how effectively. People tend to focus on what is measured and will work to achieve established goals. The metrics should assess whether recruitment actions are working. Measuring well and often is critical: "If you're not defining and measuring, you can't make improvements."⁸ Some staffing actions worth measuring include the number of hires, the time it takes to fill a vacant position, turnover and retention rates, internal customer satisfaction, number of applicants by source, and offer-to-accept

⁷ The objectives of the website include that of better informing the general public; providing an informational resource for teachers, administrators, and DoD program managers, and providing guidance for prospective program participants.

⁸ Tim Villanueva, "Back to Basics: Put best practices before technology to improve recruiting," *HR Magazine*, May 2003, Vol. 48, No. 5.

ratios. Cost per hire is another common measure used by recruiters, but it may be difficult to track in an organization that uses volunteer recruiters.

SUMMARY

DoD is facing the impending loss of a significant percentage of highly skilled members of the acquisition workforce, while at the same time needing to develop new skill sets in the current workforce to keep up with changes in the business environment. Our recommendations for addressing this situation provide a series of recruitment enhancing measures that can be taken at the department, agency, and local level.

DoD needs to start now to take full advantage of the sluggish economy and the companion higher rate of unemployment. Employing the full slate of measures that we propose offers the potential of substantially improving the future AT&L workforce, but taking action on any combination of measures will certainly improve recruiting performance.

Appendix A

Interview Guides

HIRING MANAGER/SUPERVISOR INTERVIEW GUIDE

Agency, Date, Location: _____

Agency Reps (name, title, phone,
email) _____

LMI Staff: _____

Link with Strategic Planning

1. From your perspective, how does the organization determine recruitment needs? Are they based on workforce analyses (*identifying competency and skill gaps caused by retirements, separations, and turnovers, and assessing workforce diversity*), human capital plan, strategic plan, workforce plan, or succession plan?
2. What are the critical recruiting goals for your area of responsibility? By acquisition career field? What grade levels?

Use of Best Practices - Recruiting

3. What is your role in the recruiting process? Define your recruiting responsibilities.
4. Our research has identified several recruiting "Best Practices" used by some government agencies and private sector organizations. Please describe any personal experience you may have had with the following individual practices.

Attracting

- a. Employee Referral Incentive Program
- b. College work/study programs (e.g., coop, summer hire, intern)
- c. College relationships (e.g., corporate sponsorships (professional interaction), campus presence (information seminars))

-
- d. Employment Branding campaign (Employer of choice)
 - e. Marketing strategy
 - f. Push technology (e.g., web-based subscription “pop-up” ads, key word subscription, targeted audience on internet). Also, please describe your internet presence.

Candidate Identification

- a. Recruiters (e.g., Who recruits, (in house or contracted personnel, HR or technical personnel, or teams)? How do they build relationships and with who? What type of materials do they present?)
- b. Tailored recruiting strategy for hard-to-fill career fields or hard-to-hire for geographical areas
- c. Targeted recruitment strategies to contribute to workforce diversity
- d. Integrated and managed recruiting strategy (using multiple sourcing approaches: Alumni networks, cold calls, networking events, career invitational, college recruiting, job fairs, research firms, job boards, targeted & mass advertising)

Response Management

- a. Promoting the position/organization to the candidate to create a high level of interest. (e.g. site visits (work demos), highlighting exceptional benefits, interesting ‘pitch’)
- b. Commercial response management system (e.g., what CRM tools or HRIS tools are used?)
- c. Web presence (Web-site with the ability to accept and collect resumes and applications)

Selection

- a. Delegated examining/direct hire authorities

Closing Deal

- a. Recruitment/relocation bonuses
5. What other tools and methods (not mentioned above) are you personally using to recruit qualified employees?

6. Describe your sourcing methods, including any non-traditional methods. Which are the most productive? Which work best to find passive candidates and/or attract active candidates?

Local Area Recruitment Issues

7. The entire DoD acquisition workforce faces recruiting challenges. Why is it more difficult to recruit here?
8. Is it more difficult to recruit certain skills? If so, which ones?

Impact of Pay & link to benefits (total compensation package)

9. What impact does the government compensation scale have on recruiting?
10. Other than salary and bonuses, what government benefits have you been able to use to successfully to compete for talent with the private sector?

For reference, attached is a list of non-monetary incentives available to government employees.

Measuring Success

11. . Do you think the recruiting situation will improve on its own - without any changes by your organization, Service, or DoD? If not, what are some recommended process improvements?
12. Is there enough leadership and resource priority being given to recruiting efforts? Are additional resources needed to assist local recruiting efforts and enable AT&L employers to become more competitive in their respective locations? Does this differ by functional area?

HR INTERVIEW GUIDE

Agency, Date, Location: _____

Agency Reps (name, title, phone,
email)_____

LMI Staff:_____

Link with Strategic Planning

1. How are recruitment needs determined? Are they based on workforce analyses (*identifying competency and skill gaps caused by retirements, separations, and turnovers, and assessing workforce diversity*), human capital plan, strategic plan, workforce plan, or succession plan?
2. What are your critical recruiting goals? By acquisition career field? What grade levels?

Use of Best Practices - Recruiting

3. What is your role in the recruiting process? Define your recruiting responsibilities.
4. Our research has identified several recruiting "Best Practices" used by some government agencies and private sector organizations. Please describe any personal experience you may have had with the following individual practices.

Attracting

- a. Employee Referral Incentive Program
- b. College work/study programs (e.g., coop, summer hire, intern)
- c. College relationships (e.g., corporate sponsorships (professional interaction), campus presence (information seminars))
- d. Employment Branding campaign (Employer of choice)
- e. Marketing strategy
- f. Push technology (e.g., web-based subscription "pop-up" ads, key word subscription, targeted audience on internet). Also, please describe your internet presence.

Candidate Identification

- a. Recruiters (e.g., Who recruits, (in house or contracted personnel, HR or technical personnel, or teams)? How do they build relationships and with who? What type of materials do they present?)
- b. Tailored recruiting strategy for hard-to-fill career fields or hard-to-hire for geographical areas
- c. Targeted recruitment strategies to contribute to workforce diversity
- d. Integrated and managed recruiting strategy (using multiple sourcing approaches: Alumni networks, cold calls, networking events, career invitational, college recruiting, job fairs, research firms, job boards, targeted & mass advertising)

Response Management

- a. Promoting the position/organization to the candidate to create a high level of interest. (e.g. site visits (work demos), highlighting exceptional benefits, interesting 'pitch')
- b. Commercial response management system (e.g., what CRM tools or HRIS tools are used?)
- c. Web presence (Web-site with the ability to accept and collect resumes and applications)

Selection

- a. Delegated examining/direct hire authorities

Closing Deal

- a. Recruitment/relocation bonuses
- 5. What other tools and methods (not mentioned above) are you using to recruit qualified employees?
 - 6. Describe your sourcing methods, including any non-traditional methods. Which are the most productive? Which work best to find passive candidates and/or attract active candidates?

Local Area Recruitment Issues

- 7. The entire DoD acquisition workforce faces recruiting challenges. Why is it more difficult to recruit here?
- 8. Is it more difficult to recruit certain skills? If so, which ones?

Impact of Pay & link to benefits (total compensation package)

9. What impact does the government compensation scale have on recruiting?
10. Other than salary and bonuses, what government benefits have you been able to use to successfully to compete for talent with the private sector?

For reference, attached is a list of non-monetary incentives available to government employees.

Measuring Success

11. How do you measure how well these tool/programs/authorities are working?
 - a. applicants by sourcing pool
 - b. time to fill
 - c. cost per hire
 - d. retention ratios
 - e. offer to acceptance ratios
 - f. others?
12. Do you think the recruiting situation will improve on its own - without any changes by your organization, Service, or DoD? If not, what are some recommended process improvements?
13. Is there enough leadership and resource priority being given to recruiting efforts? Are additional resources needed to assist local recruiting efforts and enable AT&L employers to become more competitive in their respective locations? Does this differ by functional area?

EMPLOYEE INTERVIEW GUIDE

Agency, Date, Location: _____

Agency Reps (name, title, phone,
email) _____

LMI Staff: _____

Note: Attachment 1 contains important employment-related questions to be answered individually - NOT during the focus group. It can be completed either before or after group session - but it needs to be collected by the end of session.

General Perceptions

1. How would you describe the local job market?
2. What was your perception of government service prior to your interest in this job? What impacted that perception?
3. How has that perception changed, and why?

Personal Recruiting Experiences

4. What was the personal contact during the recruitment/application process? When did it occur? Was it adequate?
5. What could be done better during the recruitment process?

Pay and Benefits

6. Was DoD pay competitive?
7. How would you describe the benefits offered you versus those offered by the private sector?
8. Which benefits do you value most?
9. What impact did non-monetary benefits have in your decision to accept offer? Did they offset the higher pay in private sector (if applicable)?

Recommendations

10. What does the government need to do to assure your continued service?
11. What do college students need to know about the civilian federal government workforce, and how do we tell them?

Agency, Date, Location _____

Please answer the following questions - based on your personal experience. This can be done either before or after the focus group discussion. Please turn in completed questionnaire to the LMI facilitator before you leave the room. Thank you.

General Information

1. How long have you worked for this agency?
2. Were you involved in a student coop or intern program prior to being hired?

Personal Recruiting Experiences

3. Describe the way you went about your job search and the extent you utilized:
 - a. Job Fairs
 - b. Student Employment Office
 - c. Print advertisements: newspaper, tech pubs, etc.
 - d. WEB - described the sites you used and why
4. How did you hear about this job opportunity? Who recruited you? Did you make the initial contact with the agency?
5. What type of materials were presented - hard copy brochures, internet web-sites, personal presentations?
6. What motivated you to apply?
7. Did you personally visit work site during recruitment process?
8. How long did it take to receive the job offer after the final interview? Did it take much longer than other experiences (you have had personally or have heard about from friends)?
9. Why did you decide to accept the job offer?

Future Plans

10. Do you plan to make a career of government service?

Appendix B

Salary Comparisons

In this appendix, we compare government and private-sector salaries in the cities we visited.

Table B-1. Pay Comparison of Federal Government and Private Sector Salaries for Boston, MA

Career Field	2003 Federal Government annual pay rates from OPM ¹		BLS Occupational Employment Statistics 2001 Mean annual salaries	
501 Cost Estimator	GS-5 Step 1 GS-7 Step 1 GS-11 Step 4	\$26,958 \$33,393 \$54,366	BLS SOC 13-1051 Boston metro mean annual salary National mean annual salary	\$62,270 \$50,450
854 Computer Engineer	GS-5 Step 1 GS-7 Step 1 GS-11 Step 4	\$33,522 \$40,071 \$58,148	BLS SOC 15-1032 Boston National computer engineering grads, average starting salary ²	\$85,560 \$74,490 \$52,722
855 Electronics Engineer	GS-5 Step 1 GS-7 Step 1 GS-11 Step 4	\$30,471 \$37,749 \$54,440	BLS SOC 17-2072 Boston National electrical engineering grads, average starting salary ²	\$77,480 \$69,710 \$50,615
861 Aerospace Engineer	GS-5 Step 1 GS-7 Step 1 GS-11	\$30,471 \$37,749 \$53,007	BLS SOC 17-2011 Boston National aerospace engineering grads, annual starting salary range ³	\$81,030 \$71,380 \$44,000-51,000
1102 Contracting	GS-5 GS-7 GS-11	\$26,958 \$33,393 \$54,366	BLS SOC 13-1023 Boston National	\$50,040 \$46,090
1150 Industrial Specialist	GS-5 GS-7 GS-11	\$26,958 \$33,393 \$54,366	BLS SOC 11-3051 Boston National	\$78,500 \$68,310
1910 Quality Assurance	GS-5 GS-7 GS-11	\$26,958 \$33,393 \$54,366	BLS SOC 51-9061 Boston National Quality Control Specialist (highest wage paid, national) ⁴	\$32,650 \$29,210 \$145,000

¹GS-5 and -7 pay rates are at Step 1. GS-11 pay rates are at Step 4. Special rates of pay are listed where appropriate.

²National Association of Colleges and Employers *Winter 2003 Salary Survey*

³National Association of Colleges and Employers *Fall 2001 Salary Survey*

⁴*American Salaries & Wages Survey*, 7th Edition

Table B-2. Pay Comparison of Federal Government and Private Sector Salaries for Huntsville, AL

Career Field	2003 Federal Government annual pay rates from OPM tables		BLS Occupational Employment Statistics 2001 Mean annual salaries	
501 Cost Estimator	GS-5 GS-7 GS-11	\$25,800 \$31,958 \$52,031	BLS SOC 13-1051 Huntsville mean annual salary National mean annual salary	\$47,630 \$50,450
854 Computer Engineer	GS-5 GS-7 GS-11	\$32,350 \$38,619 \$55,785	BLS SOC 15-1032 Huntsville National computer engineering grads, average starting salary	\$67,240 \$74,490 \$52,722
855 Electronics Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$54,440	BLS SOC 17-2072 Huntsville National electrical engineering grads, average starting salary	\$75,040 \$69,710 \$50,615
861 Aerospace Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$53,007	BLS SOC 17-2011 Huntsville National aerospace engineering grads, annual starting salary range ²	\$71,260 \$71,380 \$44,000- 51,000
1102 Contracting	GS-5 GS-7 GS-11	\$25,800 \$31,958 \$52,031	BLS SOC 13-1023 Huntsville National	\$54,740 \$46,090
1150 Industrial Specialist	GS-5 GS-7 GS-11	\$25,800 \$31,958 \$52,031	BLS SOC 11-3051 Huntsville National	\$66,450 \$68,310
1910 Quality Assurance	GS-5 GS-7 GS-11	\$25,800 \$31,958 \$52,031	BLS SOC 51-9061 Huntsville National Quality Control Specialist (highest wage paid, national) ³	\$36,160 \$29,210 \$145,000

¹National Association of Colleges and Employers *Winter 2003 Salary Survey*²National Association of Colleges and Employers *Fall 2001 Salary Survey*³*American Salaries & Wages Survey*, 7th Edition

Table B-3. Pay Comparison of Federal Government and Private Sector Salaries for Los Angeles, CA

Career Field	2003 Federal Government annual pay rates from OPM tables		BLS Occupational Employment Statistics 2001 Mean annual salaries	
501 Cost Estimator	GS-5 GS-7 GS-11	\$27,594 \$34,179 \$55,647	BLS SOC 13-1051 Los Angeles mean annual salary National mean annual salary	\$54,440 \$50,450
854 Computer Engineer	GS-5 GS-7 GS-11	\$33,991 \$40,652 \$59,094	BLS SOC 15-1032 Los Angeles National computer engineering grads, average starting salary ¹	\$73,640 \$74,490 \$52,722
855 Electronics Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$55,647	BLS SOC 17-2072 Los Angeles National electrical engineering grads, average starting salary	\$74,740 \$69,710 \$50,615
861 Aerospace Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$55,647	BLS SOC 17-2011 Los Angeles National aerospace engineering grads, annual starting salary range ²	\$73,480 \$71,380 \$44,000-51,000
1102 Contracting	GS-5 GS-7 GS-11	\$27,594 \$34,179 \$55,647	BLS SOC 13-1023 Los Angeles National	\$48,970 \$46,090
1150 Industrial Specialist	GS-5 GS-7 GS-11	\$27,594 \$34,179 \$55,647	BLS SOC 11-3051 Los Angeles National	\$70,090 \$68,310
1910 Quality Assurance	GS-5 GS-7 GS-11	\$27,594 \$34,179 \$55,647	BLS SOC 51-9061 Los Angeles National Quality Control Specialist (highest wage paid, national) ³	\$25,190 \$29,210 \$145,000

¹National Association of Colleges and Employers *Winter 2003 Salary Survey*

²National Association of Colleges and Employers *Fall 2001 Salary Survey*

³*American Salaries & Wages Survey*, 7th Edition

Table B-4. Pay Comparison of Federal Government and Private Sector Salaries for Sacramento, CA

Career Field	2003 Federal Government annual pay rates from OPM tables		BLS Occupational Employment Statistics 2001 Mean annual salaries	
501 Cost Estimator	GS-5 GS-7 GS-11	\$26,557 \$32,896 \$53,558	BLS SOC 13-1051 Sacramento mean annual salary National mean annual salary	\$52,880 \$50,450
854 Computer Engineer	GS-5 GS-7 GS-11	\$32,819 \$39,200 \$56,730	BLS SOC 15-1032 Sacramento National computer engineering grads, average starting salary ¹	\$83,780 \$74,490 \$52,722
855 Electronics Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$54,440	BLS SOC 17-2072 Sacramento National electrical engineering grads, average starting salary	\$65,420 \$69,710 \$50,615
861 Aerospace Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$53,558	BLS SOC 17-2011 Sacramento National aerospace engineering grads, annual starting salary range ²	\$68,480 \$71,380 \$44,000-51,000
1102 Contracting	GS-5 GS-7 GS-11	\$26,557 \$32,896 \$53,558	BLS SOC 13-1023 Sacramento National	\$44,980 \$46,090
1150 Industrial Specialist	GS-5 GS-7 GS-11	\$26,557 \$32,896 \$53,558	BLS SOC 11-3051 Sacramento National	\$70,600 \$68,310
1910 Quality Assurance	GS-5 GS-7 GS-11	\$26,557 \$32,896 \$53,558	BLS SOC 51-9061 Sacramento National Quality Control Specialist (highest wage paid, national) ³	\$27,500 \$29,210 \$145,000

¹National Association of Colleges and Employers *Winter 2003 Salary Survey*²National Association of Colleges and Employers *Fall 2001 Salary Survey*³*American Salaries & Wages Survey*, 7th Edition

Table B-5. Pay Comparison of Federal Government and Private Sector Salaries for San Diego, CA

Career Field	2003 Federal Government annual pay rates from OPM tables		BLS Occupational Employment Statistics 2001 Mean annual salaries	
501 Cost Estimator	GS-5 GS-7 GS-11	\$26,740 \$33,123 \$53,927	BLS SOC 13-1051 San Diego mean annual salary National mean annual salary	\$52,540 \$50,450
854 Computer Engineer	GS-5 GS-7 GS-11	\$32,819 \$39,200 \$56,730	BLS SOC 15-1032 San Diego National computer engineering grads, average starting salary ¹	\$78,230 \$74,490 \$52,722
855 Electronics Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$54,440	BLS SOC 17-2072 San Diego National electrical engineering grads, average starting salary ¹	\$75,830 \$69,710 \$50,615
861 Aerospace Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$53,927	BLS SOC 17-2011 San Diego National aerospace engineering grads, annual starting salary range ²	\$73,660 \$71,380 \$44,000-51,000
1102 Contracting	GS-5 GS-7 GS-11	\$26,740 \$33,123 \$53,927	BLS SOC 13-1023 San Diego National	\$48,220 \$46,090
1150 Industrial Specialist	GS-5 GS-7 GS-11	\$26,740 \$33,123 \$53,927	BLS SOC 11-3051 San Diego National	\$70,720 \$68,310
1910 Quality Assurance	GS-5 GS-7 GS-11	\$26,740 \$33,123 \$53,927	BLS SOC 51-9061 San Diego National Quality Control Specialist (highest wage paid, national) ³	\$29,840 \$29,210 \$145,000

¹National Association of Colleges and Employers *Winter 2003 Salary Survey*

²National Association of Colleges and Employers *Fall 2001 Salary Survey*

³*American Salaries & Wages Survey*, 7th Edition

Table B-6. Pay Comparison of Federal Government and Private Sector Salaries for San Jose, CA

Career Field	2003 Federal Government annual pay rates from OPM tables		BLS Occupational Employment Statistics 2001 Mean annual salaries	
501 Cost Estimator	GS-5 GS-7 GS-11	\$28,384 \$35,158 \$57,241	BLS SOC 13-1051 San Jose mean annual salary National mean annual salary	\$70,450 \$50,450
854 Computer Engineer	GS-5 GS-7 GS-11	\$34,929 \$41,813 \$60,985	BLS SOC 15-1032 San Jose National computer engineering grads, average starting salary	\$91,660 \$74,490 \$52,722
855 Electronics Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$57,241	BLS SOC 17-2072 San Jose National electrical engineering grads, average starting salary	\$78,580 \$69,710 \$50,615
861 Aerospace Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$57,241	BLS SOC 17-2011 San Jose National aerospace engineering grads, annual starting salary range ²	\$74,490 \$71,380 \$44,000-51,000
1102 Contracting	GS-5 GS-7 GS-11	\$28,384 \$35,158 \$57,241	BLS SOC 13-1023 San Jose National	\$58,710 \$46,090
1150 Industrial Specialist	GS-5 GS-7 GS-11	\$28,384 \$35,158 \$57,241	BLS SOC 11-3051 San Jose National	\$95,910 \$68,310
1910 Quality Assurance	GS-5 GS-7 GS-11	\$28,384 \$35,158 \$57,241	BLS SOC 51-9061 San Jose National Quality Control Specialist (highest wage paid, national) ³	\$32,230 \$29,210 \$145,000

¹National Association of Colleges and Employers *Winter 2003 Salary Survey*²National Association of Colleges and Employers *Fall 2001 Salary Survey*³*American Salaries & Wages Survey*, 7th Edition

*Table B-7. Pay Comparison of Federal Government and Private Sector Salaries
for Washington, DC, Baltimore*

Career Field	2003 Federal Government annual pay rates from OPM tables		BLS Occupational Employment Statistics 2001 Mean annual salaries	
501 Cost Estimator	GS-5 GS-7 GS-11	\$26,479 \$32,736 \$53,298	BLS SOC 13-1051 DC metro mean annual salary Baltimore mean annual salary National mean annual salary	\$53,770 \$50,290 \$50,450
854 Computer Engineer	GS-5 GS-7 GS-11	\$32,819 \$39,200 \$56,730	BLS SOC 15-1032 DC Baltimore National computer engineering grads, average starting salary	\$77,010 \$77,740 \$74,490 \$52,722
855 Electronics Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$54,440	BLS SOC 17-2072 DC Baltimore National electrical engineering grads, average starting salary	\$77,330 \$74,050 \$69,710 \$50,615
861 Aerospace Engineer	GS-5 GS-7 GS-11	\$30,471 \$37,749 \$53,298	BLS SOC 17-2011 DC Baltimore National aerospace engineering grads, annual starting salary range ²	\$72,360 \$62,660 \$71,380 \$44,000- 51,000
1102 Contracting	GS-5 GS-7 GS-11	\$26,429 \$32,736 \$53,298	BLS SOC 13-1023 DC Baltimore National	\$59,200 \$45,970 \$46,090
1150 Industrial Specialist	GS-5 GS-7 GS-11	\$26,429 \$32,736 \$53,298	BLS SOC 11-3051 DC Baltimore National	\$69,740 \$70,560 \$68,310
1910 Quality Assurance	GS-5 GS-7 GS-11	\$26,429 \$32,736 \$53,298	BLS SOC 51-9061 DC Baltimore National Quality Control Specialist (highest wage paid, national) ³	\$32,300 \$32,320 \$29,210 \$145,000

¹National Association of Colleges and Employers *Winter 2003 Salary Survey*

²National Association of Colleges and Employers *Fall 2001 Salary Survey*

³*American Salaries & Wages Survey*, 7th Edition

Logistics Management Institute

2000 Corporate Ridge

McLean, Virginia 22102-7805

703-917-9800

www.lmi.org